YAMAHA

114 pgs

OWNER'S MANUAL

VIRAGO

XV1100L(C), XV1100SL(C)

LIT-11626-12-06

3JK-28199-1B

Dear Yamaha ATV Owner: Please Review this IMPORTANT SAFETY CARD before operating your ATV (If card is not attached, call 1-800-344-6418).

Dear New Yamaha ATV Owner:

CONGRATULATIONS ON THE PURCHASE OF YOUR NEW YAMAHA ATV. You have purchased a quality Yamaha product that, with proper use and care, will provide hours of riding pleasure. **BEFORE YOU OPERATE YOUR NEW ATV, Yamaha recommends these important points:**

- READ YOUR OWNER'S MANUAL
- A CHILD UNDER 12 YEARS OLD SHOULD NOT OPERATE AN ATV WITH ENGINE SIZE 70CC OR GREATER
- A CHILD UNDER 16 YEARS OLD SHOULD NOT OPERATE AN ATV WITH ENGINE SIZE GREATER THAN 90CC
- TAKE THE FREE HANDS-ON TRAINING COURSE OFFERED BY YAMAHA — ASK YOUR DEALER FOR DETAILS OR CALL 1-800-887-2887

If you have any questions about these points, **or if you purchased your ATV from an authorized Yamaha dealership and were not informed of the age recommendation for your ATV by the dealership,** please fill out the information below and mail this card to Yamaha **today.**

READ CAREFULLY

Name:

Address:

Telephone:
( )

ATV Model:

Purchase Date:
MO. DAY YR.

Primary I.D. (Engine Number):

Dealer Name & Address:

This is not a warranty card

NO POSTAGE
NECESSARY
IF MAILED
IN THE
UNITED STATES

BUSINESS REPLY MAIL

FIRST CLASS PERMIT NO. 4 CYPRESS, CA

POSTAGE WILL BE PAID BY ADDRESSEE

YAMAHA MOTOR CORPORATION U.S.A.
P.O. BOX 6555
CYPRESS, CALIFORNIA **90630-9989**

ATTN: SALES ADMINISTRATION

INTRODUCTION

EAU00002

Congratulations on your purchase of the Yamaha XV1100(C), XV1100S(C). This model is the result of Yamaha's vast experience in the production of fine sporting, touring, and pacesetting racing machines. It represents the high degree of craftsmanship and reliability that have made Yamaha a leader in these fields.

This manual will give you an understanding of the operation, inspection, and basic maintenance of this motorcycle. If you have any questions about the operation or maintenance of your motorcycle, please consult a Yamaha dealer.

The design and manufacture of this Yamaha motorcycle fully comply with the emissions standards for clean air applicable at the date of manufacture. Yamaha has met these standards without reducing the motorcycle's performance or economy of operation. To maintain these high standards, it is important that you and your dealer pay close attention to the recommended maintenance schedules and operating instructions contained within this manual.

IMPORTANT MANUAL INFORMATION

EAU00003

IMPORTANT MANUAL INFORMATION

Particularly important information is distinguished in this manual by the following notations:

⚠	The Safety Alert Symbol means ATTENTION! BECOME ALERT! YOUR SAFETY IS INVOLVED!
⚠ WARNING	Failure to follow WARNING instructions could result in severe injury or death to the motorcycle operator, a bystander or a person inspecting or repairing the motorcycle.
CAUTION:	A CAUTION indicates special precautions that must be taken to avoid damage to the motorcycle.
NOTE:	A NOTE provides key information to make procedures easier or clearer.

NOTE:

- This manual should be considered a permanent part of this motorcycle and should remain with it even if the motorcycle is subsequently sold.
- Yamaha continually seeks advancements in product design and quality. Therefore, while this manual contains the most current product information available at the time of printing, there may be minor discrepancies between your motorcycle and this manual. If there is any question concerning this manual, please consult your Yamaha dealer.

IMPORTANT MANUAL INFORMATION

EW000000

⚠ WARNING

PLEASE READ THIS MANUAL AND THE "YOU AND YOUR MOTORCYCLE: RIDING TIPS" BOOKLET CAREFULLY AND COMPLETELY BEFORE OPERATING THIS MOTORCYCLE. DO NOT ATTEMPT TO OPERATE THIS MOTORCYCLE UNTIL YOU HAVE ATTAINED A SATISFACTORY KNOWLEDGE OF ITS CONTROLS AND OPERATING FEATURES AND UNTIL YOU HAVE BEEN TRAINED IN SAFE AND PROPER RIDING TECHNIQUES. REGULAR INSPECTIONS AND CAREFUL MAINTENANCE, ALONG WITH GOOD RIDING SKILLS, WILL ENSURE THAT YOU SAFELY ENJOY THE CAPABILITIES AND THE RELIABILITY OF THIS MOTORCYCLE.

AFFIX DEALER

LABEL HERE

EAU01193

XV1100L(C)/XV1100SL(C)
OWNER'S MANUAL
©1998 by Yamaha Motor Corporation, U.S.A.
1st Edition, April 1998
All rights reserved. Any reprinting or unauthorized use without the written permission of Yamaha Motor Corporation, U.S.A. is expressly prohibited.
Printed in Japan
P/N LIT-11626-12-06

TABLE OF CONTENTS

1 SAFETY INFORMATION

2 DESCRIPTION

3 INSTRUMENT AND CONTROL FUNCTIONS

4 PRE-OPERATION CHECKS

5 OPERATION AND IMPORTANT RIDING POINTS

6 PERIODIC MAINTENANCE AND MINOR REPAIR

7 CLEANING AND STORAGE

8 SPECIFICATIONS

9 CONSUMER INFORMATION

INDEX

SAFETY INFORMATION

Safe riding 1-1
Protective apparel 1-3
Modification 1-3
Loading and accessories 1-3
Gasoline and exhaust gas 1-5
Location of the important labels 1-7

⚠ SAFETY INFORMATION

EAU00014

TWO-WHEELED MOTORCYCLES ARE SINGLE TRACK VEHICLES. THEIR SAFE USE AND OPERATION ARE DEPENDENT UPON THE USE OF PROPER RIDING TECHNIQUES AS WELL AS THE EXPERTISE OF THE OPERATOR.

EVERY OPERATOR SHOULD KNOW THE FOLLOWING REQUIREMENTS BEFORE RIDING.
HE OR SHE SHOULD:

1. OBTAIN THOROUGH INSTRUCTIONS FROM A COMPETENT SOURCE ON ALL ASPECTS OF MOTORCYCLE OPERATION.
2. OBSERVE THE WARNINGS AND MAINTENANCE REQUIREMENTS IN THE OWNER'S MANUAL.
3. OBTAIN QUALIFIED TRAINING IN SAFE AND PROPER RIDING TECHNIQUES.
4. OBTAIN PROFESSIONAL TECHNICAL SERVICE AS INDICATED BY THE OWNER'S MANUAL AND/OR WHEN MADE NECESSARY BY MECHANICAL CONDITIONS.

Safe riding

1. Always make pre-operation checks. Careful checks may help prevent an accident.
2. This motorcycle is designed to carry the operator and a passenger.
3. The failure of motorists to detect and recognize motorcycles in traffic is the predominating cause of automobile/motorcycle accidents. Many accidents have been caused by an automobile driver who did not see the motorcycle. Making yourself conspicuous appears to be very effective in reducing the chance of this type of accident.

   Therefore:
   a. Wear a brightly colored jacket.
   b. Use extra caution when you approach and pass through intersections, since intersections are the most likely places for motorcycle accidents.
   c. Ride where other motorists can see you. Avoid riding in another motorist's "blind spot".

4. Many accidents involve inexperienced operators. In fact, many operators who have been involved in accidents do not even have a current motorcycle license.
   a. Make sure you are qualified. Also, only lend your motorcycle to experienced operators.
   b. Know your skills and limits. Staying within your limits may help you to avoid an accident.
   c. We recommend that you practice riding your motorcycle where there is no traffic until you have become thoroughly familiar with your motorcycle and all of its controls.
5. Many motorcycle accidents have been caused by motorcycle operator errors. A typical error made by the operator is veering wide on a turn due to EXCESSIVE SPEED or undercornering (insufficient lean angle for the speed).
   a. Always obey the speed limits and never travel faster than warranted by road and traffic conditions.
   b. Always signal before turning or changing lanes. Make sure other motorists see you.
6. The operator's and passenger's posture are important for proper control.
   a. The operator should keep both hands on the handlebars and both feet on the operator footrests during operation to maintain control of the motorcycle.
   b. The passenger should always hold on to the operator, or the seat strap or grab bar if the motorcycle is so equipped, with both hands and keep both feet on the passenger footrests.
   c. Never carry a passenger unless he or she can firmly place both feet on the passenger footrests.
7. Never ride under the influence of alcohol or drugs.
8. This motorcycle is designed for on-road use only. It is not suitable for off-road use.

⚠ SAFETY INFORMATION

Protective apparel

The majority of fatalities from motorcycle accidents are the result of head injuries. The use of a safety helmet is the single most critical factor in the prevention or reduction of head injuries.

1. Always wear an approved helmet.
2. Wear a face shield or goggles. Wind on your unprotected eyes could contribute to an impairment of vision which could delay seeing a hazard.
3. The use of heavy boots, jacket, trousers, gloves, etc. is effective in preventing or reducing abrasions or lacerations.
4. Never wear loose fitting clothing. It could catch on the control levers, footrests, or wheels and cause injury or accident.
5. Never touch the engine or exhaust system during or after operation. They become very hot and can cause burns. Always wear protective clothing that covers your legs, ankles, and feet.
6. A passenger should also observe the above precautions.

Modification

Modifications made to the motorcycle not approved by Yamaha, or the removal of original equipment, may render your motorcycle unsafe for use and may cause severe personal injury. Modifications may also make your motorcycle illegal to use.

Loading and accessories

Adding accessories or cargo to your motorcycle can adversely affect stability and handling if the weight distribution of the machine is changed. To avoid the possibility of an accident, extreme caution should be used if adding cargo or accessories to your motorcycle. Use extra care if riding a motorcycle which has added cargo or accessories. Here are some general guidelines to follow if loading cargo or adding accessories to your motorcycle:

Loading

The total weight of the operator, passenger, accessories and cargo must not exceed the maximum load limit of 509 lbs. (231 kg).
When loading within these weight limits, keep the following in mind:

1. Cargo and accessory weight should be kept as low and close to the motorcycle as possible. Be sure to distribute the weight as evenly as possible on both sides of the machine to minimize imbalance or instability.
2. Shifting weights can create a sudden imbalance. Make sure that accessories and cargo are securely attached to the motorcycle before riding. Recheck accessory mounts and cargo restraints frequently.
3. Never attach any large or heavy items to the handlebars, front forks, or front fender. These items, including such cargo as sleeping bags, duffle bags, or tents, can create unstable handling or slow steering response.

Accessories

Genuine Yamaha accessories have been specifically designed for use on this motorcycle. Since Yamaha cannot test all other accessories which may be available, you must personally be responsible for the proper selection, installation and use of non-Yamaha accessories. You should use extreme caution when selecting and installing any accessories.

Keep in mind these guidelines for mounting accessories in addition to those provided under "LOADING".

1. Never install accessories or carry cargo that would impair the performance of your motorcycle. Carefully inspect the accessory before using it to make sure it does not in any way reduce ground clearance or cornering clearance, limit suspension travel, steering travel or control operation, or obscure lights or reflectors.

a. Accessories fitted to the handlebar or the front fork area can create instability due to improper weight distribution or aerodynamic changes. If accessories are added to the handlebar or front fork area, they must be as lightweight as possible and should be kept to a minimum.
b. Bulky or large accessories may seriously affect the stability of the motorcycle due to aerodynamic effects. Wind may attempt to lift the motorcycle, or the motorcycle may become unstable in cross winds. These accessories may also cause instability when being passed by or passing large vehicles.
c. Certain accessories can displace the operator from his or her normal riding position. This improper position limits the freedom of movement of the operator and may limit control ability. Therefore such accessories are not recommended.

2. Caution must be used if adding electrical accessories. If these accessories exceed the capacity of the motorcycle's electrical system, an electric failure could result, which could cause a dangerous loss of lights or engine power.

Gasoline and exhaust gas

1. GASOLINE IS HIGHLY FLAMMABLE:
   a. Always turn off the engine when refueling.
   b. Take care not to spill any gasoline on the engine or exhaust system when refueling.
   c. Never refuel while smoking or in the vicinity of an open flame.
2. Never start the engine or let it run for any length of time in a closed area. The exhaust fumes are poisonous and may cause loss of consciousness and death within a short time. Always operate your motorcycle in an area that has adequate ventilation.
3. Always turn off the engine before leaving the motorcycle unattended and remove the ignition key. When parking the motorcycle, note the following:
   a. The engine and exhaust system may be hot. Park the motorcycle in a place where pedestrians or children are not likely to touch these hot areas.

b. Do not park the motorcycle on a slope or soft ground; the motorcycle may fall over.
c. Do not park the motorcycle near a flammable source, e.g. a kerosene heater, or near an open flame. The motorcycle could catch fire.

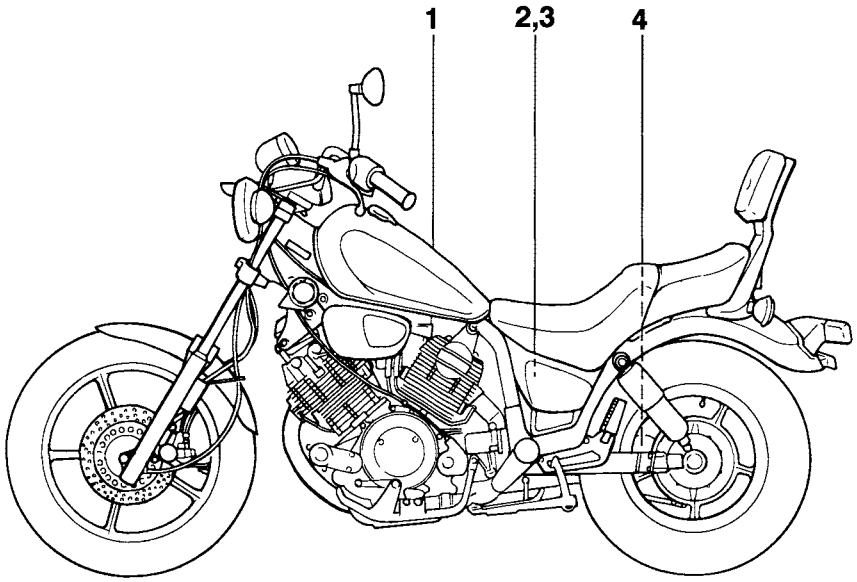
4. When transporting the motorcycle in another vehicle, be sure it is kept upright. If it should lean over, gasoline may leak out of the carburetor or fuel tank.
5. If you should swallow any gasoline, inhale a lot of gasoline vapor, or allow gasoline to get in your eyes, see your doctor immediately. If any gasoline spills on your skin or clothing, immediately wash it off with soap and water and change your clothes.

⚠ SAFETY INFORMATION

EAU00025

Location of the important labels

Please read the following labels carefully before operating this motorcycle.



1

⚠ WARNING

- **BEFORE YOU OPERATE THIS VEHICLE, READ THE OWNER'S MANUAL AND ALL LABELS.**
- **ALWAYS WEAR AN APPROVED MOTORCYCLE HELMET,** eye protection, and protective clothing.

3MX-2118K-A0

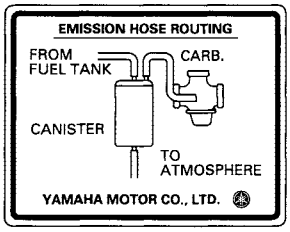
2

CAUTION

- Read owner's manual before servicing battery.
- Electrolyte will damage metal parts or paint. If electrolyte spills, wash area with fresh water immediately.
- Be sure to connect breather hose after installing battery.

3JL-28177-A0

3 California only



4

TIRE INFORMATION

Cold tire normal pressure should be set as follows.

- Up to 90 kg (198 lbs) load

FRONT : 200kPa, {2.00kgf/cm²}, 29psi
REAR : 225kPa, {2.25kgf/cm²}, 33psi

- 90 kg (198 lbs) ~ maximum load

FRONT : 200kPa, {2.00kgf/cm²}, 29psi
REAR : 250kPa, {2.50kgf/cm²}, 36psi

5FB-21668-00

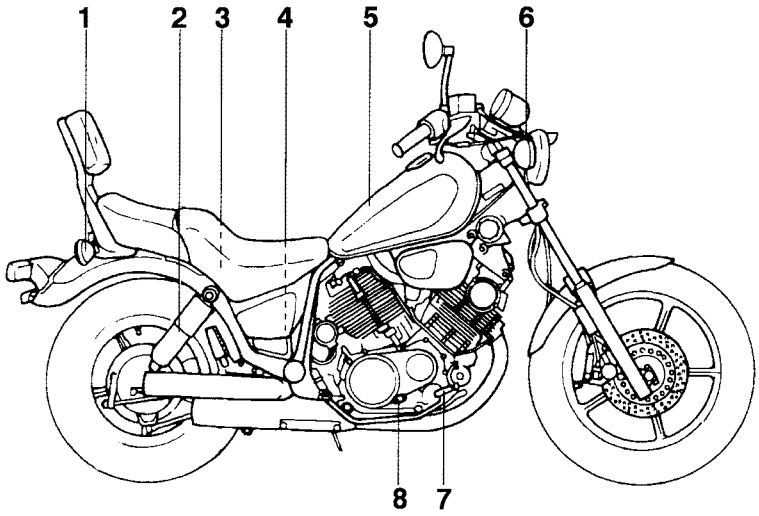
DESCRIPTION

Left view 2-1
Right view 2-2
Controls/Instruments 2-3

DESCRIPTION

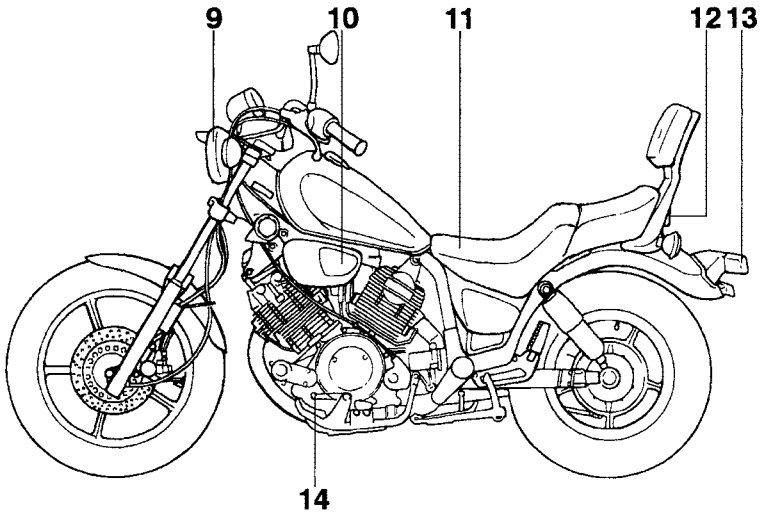
EAU00026

Left view



1. Rear flasher light
2. Rear shock absorber (page 3-13)
3. Main fuse (page 6-28)
4. Battery (page 6-26)
5. Fuel tank (page 3-10)
6. Front flasher/position light
7. Rear brake pedal (page 3-10)
8. Footrest (page 6-19)

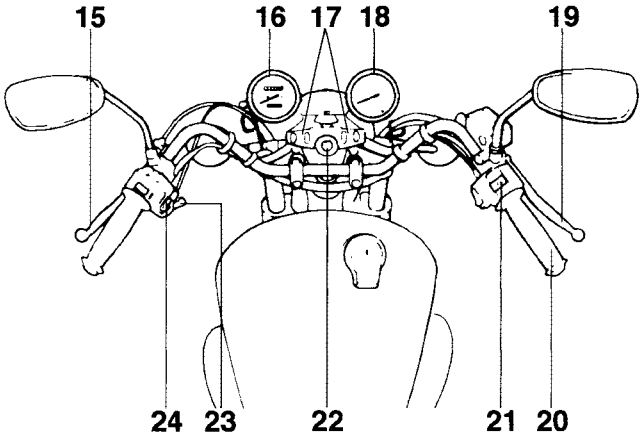
Right view



9. Headlight	(page 6-29)
10. Air filter	(page 6-12)
11. Seat	(page 3-12)
12. Tool kit	(page 6-1)
13. Tail/brake light	
14. Shift pedal	(page 3-9)

DESCRIPTION

Controls/Instruments



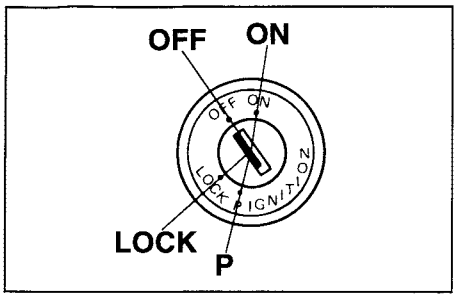
15. Clutch lever (page 3-9)
16. Speedometer (page 3-6)
17. Sub fuses (page 6-28)
18. Tachometer (page 3-6)
19. Front brake lever (page 3-9)
20. Throttle grip (page 6-14)
21. Right handlebar switches (page 3-7)
22. Main switch (page 3-1)
23. Starter (choke) (page 3-8)
24. Left handlebar switches (page 3-7)

INSTRUMENT AND CONTROL FUNCTIONS

Main switch/Steering lock 3-1
Indicator lights 3-2
Oil level indicator circuit check 3-4
Fuel indicator circuit check 3-5
Speedometer 3-6
Tachometer 3-6
Handlebar switches 3-7
Starter (choke) 3-8
Clutch lever 3-9
Shift pedal 3-9
Front brake lever 3-9
Rear brake pedal 3-10
Fuel tank cap 3-10
Fuel 3-11
Seat removal 3-12
Helmet holder 3-12
Rear shock absorber adjustment 3-13
Sidestand 3-14
Sidestand/clutch switch operation check 3-15

INSTRUMENT AND CONTROL FUNCTIONS

EAU00027



EAU00029

Main switch/Steering lock

The main switch controls the ignition and lighting systems. Its operation is described below.

EAU00032

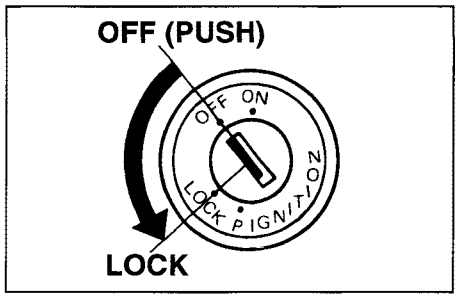
ON:

All electrical circuits are switched on, and the headlight, meter light, taillight, and front position lights come on. The engine can be started. The key cannot be removed in this position.

EAU00038

OFF:

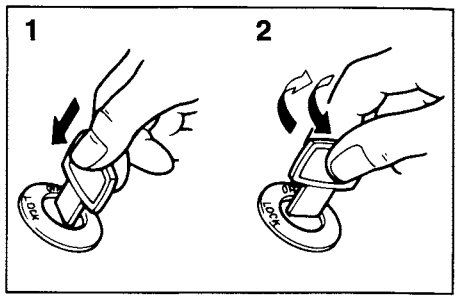
All electrical circuits are switched off. The key can be removed in this position.



EAU00041

LOCK:

The steering is locked in this position and all electrical circuits are switched off. The key can be removed in this position. To lock the steering, turn the handlebars all the way to the left or right. While pushing the key into the main switch, turn it from "OFF" to "LOCK" and remove it. To release the lock, turn the key to "OFF" while pushing.



1. Push
2. Turn

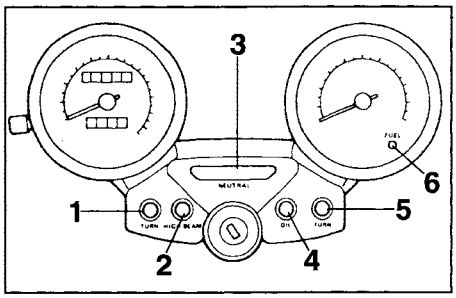
EW000016

⚠ WARNING

Never turn the key to "OFF" or "LOCK" when the motorcycle is moving. The electrical circuits will be switched off which may result in loss of control or an accident. Be sure the motorcycle is stopped before turning the key to "OFF" or "LOCK".

EAU00046

P (Parking):
The steering is locked in this position. The taillight and front position light come on but all other circuits are off. The key can be removed in this position.



1. Left turn indicator lights "TURN"
2. High beam indicator light "HIGH BEAM"
3. Neutral indicator light "NEUTRAL"
4. Oil level indicator light "OIL"
5. Right turn indicator lights "TURN"
6. Fuel indicator light "FUEL"

EAU00056

Indicator lights

EAU00060

Turn indicator lights "TURN"
The corresponding indicator flashes when the turn switch is moved to the left or right.

EAU00064

High beam indicator light "HIGH BEAM"
This indicator comes on when the headlight high beam is used.

EAU00062

Neutral indicator light "NEUTRAL"
This indicator comes on when the transmission is in neutral.

EAU01153

Oil level indicator light "OIL"
This indicator comes on when the oil level is low. This light circuit can be checked by the procedure on page 3-4.

EC000000

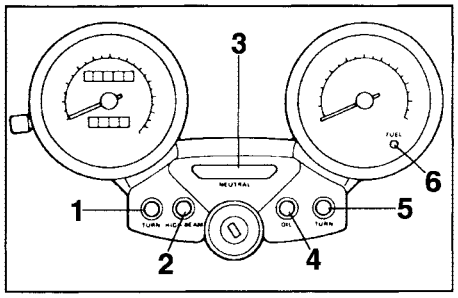
CAUTION:

Do not run the motorcycle until you know it has sufficient engine oil.

NOTE:

Even if the oil is filled to the specified level, the indicator light may flicker when riding on a slope or during sudden acceleration or deceleration, but this is not abnormal.

INSTRUMENT AND CONTROL FUNCTIONS



1. Left turn indicator lights "TURN"
2. High beam indicator light "HIGH BEAM"
3. Neutral indicator light "NEUTRAL"
4. Oil level indicator light "OIL"
5. Right turn indicator lights "TURN"
6. Fuel indicator light "FUEL"

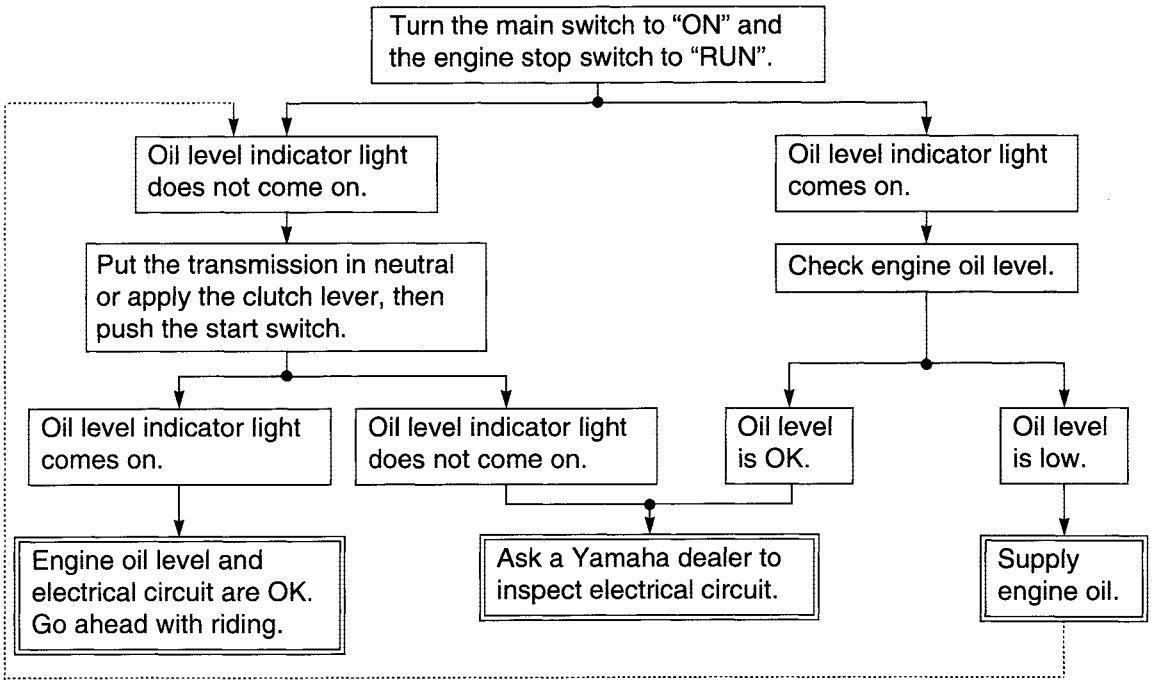
EAU01155

Fuel indicator light "FUEL"

When the fuel level drops below approximately 3.0 L (0.7 Imp gal, 0.8 US gal), this light will come on. When this light comes on, move the fuel switch to "RES". Then fill the tank at the first opportunity! This light circuit can be checked by the procedure on page 3-5.

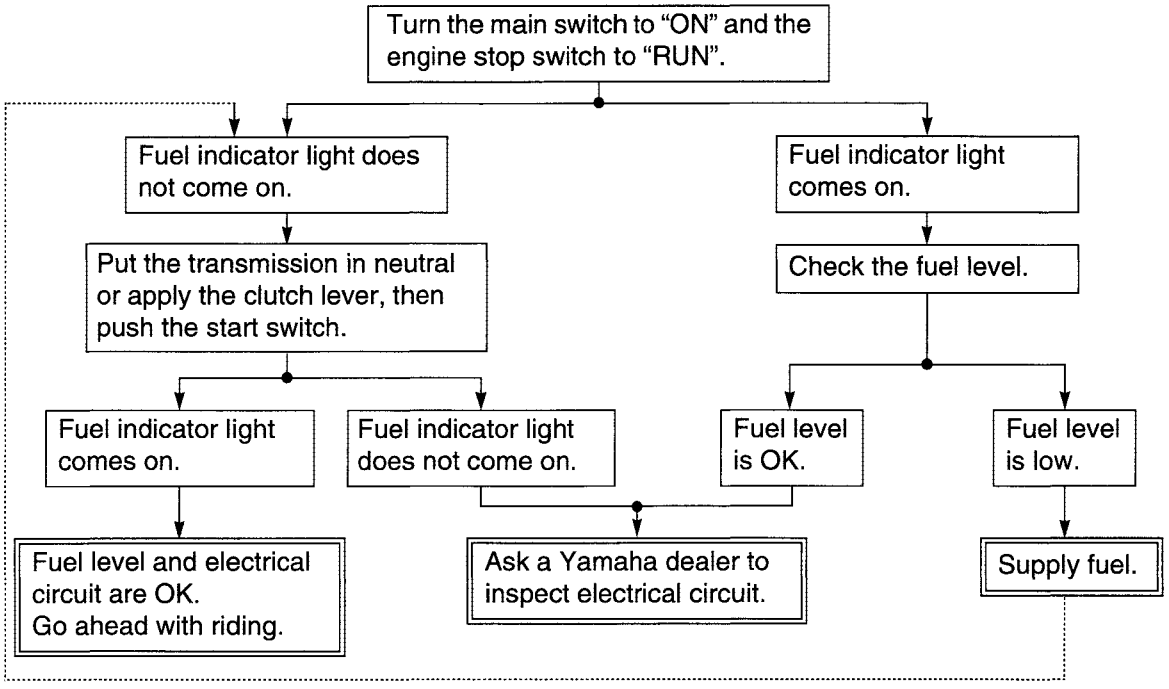
EAU00071

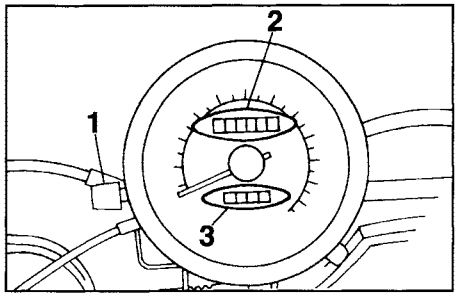
Oil level indicator circuit check


Turn the main switch to "ON" and the engine stop switch to "RUN".
Oil level indicator light does not come on.
Oil level indicator light comes on.
Put the transmission in neutral or apply the clutch lever, then push the start switch.
Check engine oil level.
Oil level indicator light comes on.
Oil level indicator light does not come on.
Oil level is OK.
Oil level is low.
Engine oil level and electrical circuit are OK. Go ahead with riding.
Ask a Yamaha dealer to inspect electrical circuit.
Supply engine oil.

EAU00085

Fuel indicator circuit check


Turn the main switch to "ON" and the engine stop switch to "RUN".
Fuel indicator light does not come on.
Fuel indicator light comes on.
Put the transmission in neutral or apply the clutch lever, then push the start switch.
Check the fuel level.
Fuel indicator light comes on.
Fuel indicator light does not come on.
Fuel level is OK.
Fuel level is low.
Fuel level and electrical circuit are OK. Go ahead with riding.
Ask a Yamaha dealer to inspect electrical circuit.
Supply fuel.

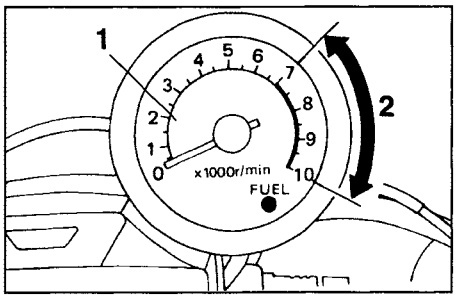


1. Reset knob
2. Odometer
3. Trip odometer

EAU00095

Speedometer

The speedometer shows riding speed. This speedometer is equipped with an odometer and trip odometer. The trip odometer can be reset to "0" with the reset knob. Use the trip odometer to estimate how far you can ride on a tank of fuel. This information will enable you to plan fuel stops in the future.



1. Tachometer
2. Red zone

EAU00101

Tachometer

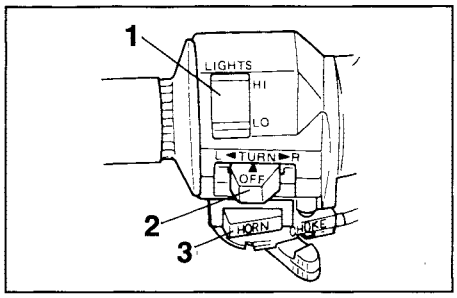
This model is equipped with an electric tachometer so the rider can monitor the engine speed and keep it within the ideal power range.

EC000003

CAUTION:

Do not operate in the red zone.
Red zone: 7,000 r/min and above

INSTRUMENT AND CONTROL FUNCTIONS



1. Dimmer switch "LIGHTS"
2. Turn signal switch "TURN"
3. Horn switch "HORN"

EAU00118

Handlebar switches

EAU00122

Dimmer switch "LIGHTS"

Turn the switch to "HI" for the high beam and to "LO" for the low beam.

EAU01189

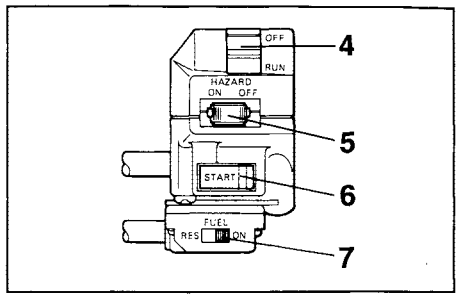
Turn signal switch "TURN"

This model is equipped with self-canceling turn signals. To signal a right-hand turn, push the switch to the right. To signal a left-hand turn, push the switch to the left. Once the switch is released, it will return to the center position and self-cancel after the motorcycle has traveled both about 150 m (490 ft) and for approximately 15 seconds. The self-canceling mechanism only operates when the motorcycle is moving. Therefore the signal will not self-cancel while you are stopped at an intersection. The signal may also be canceled manually by pushing the switch in after it has returned to the center position.

EAU00130

Horn switch "HORN"

Press the switch to sound the horn.



4. Engine stop switch "ENGINE STOP"
5. Hazard switch "HAZARD"
6. Start switch "START"
7. Fuel reserve switch "FUEL"

EAU00137

Engine stop switch "ENGINE STOP"

The engine stop switch is a safety device for use in an emergency such as when the motorcycle overturns or if trouble occurs in the throttle system. Turn the switch to "RUN" to start the engine. In case of emergency, turn the switch to "OFF" to stop the engine.

EAU00146

Hazard switch "HAZARD"

The hazard switch should be turned on under emergency or hazardous conditions. All turn signal lights will flash simultaneously when this switch is turned on with the main switch in the "ON" position.

EC000006

CAUTION:

The battery can discharge from extended use, making it difficult to operate the starter.

NOTE:

Turn on the hazard switch to warn other drivers if your motorcycle must be stopped where it might be a traffic hazard.

EAU00141

Start switch "START"

The starter motor cranks the engine when pushing the start switch.

EC000005

CAUTION:

See starting instructions prior to starting the engine.

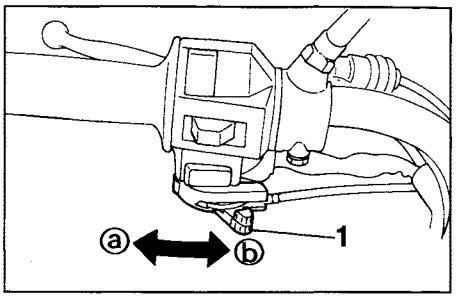
EAU00148

Fuel reserve switch "FUEL"

This switch should usually be kept on while riding. If the fuel indicator light comes on while riding, move the switch to "RES" and refuel at the first opportunity. Then move the switch to "ON".

NOTE:

When the switch is turned to reserve "RES", about 3.0 L (0.7 Imp gal, 0.8 US gal) remain in the fuel tank.



1. Starter (choke)

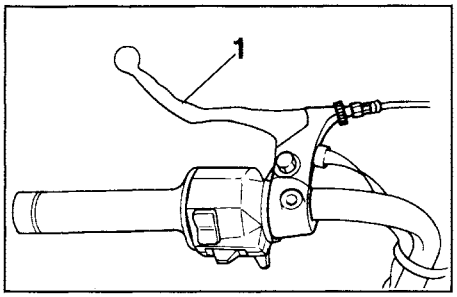
EAU00211

Starter (choke)

Starting a cold engine requires a richer air-fuel mixture. A separate starter circuit supplies this mixture.

Move in direction ⓐ to turn on the starter (choke).

Move in direction ⓑ to turn off the starter (choke).

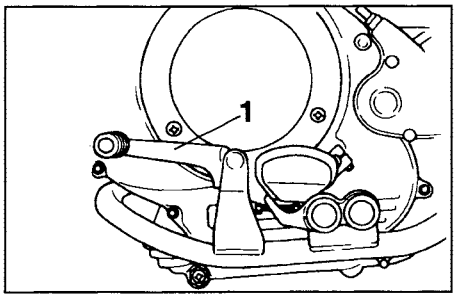


1. Clutch lever

EAU00152

Clutch lever

The clutch lever is located on the left handlebar, and the ignition circuit cut-off system is incorporated in the clutch lever holder. Pull the clutch lever to the handlebar to disengage the clutch, and release the lever to engage the clutch. The lever should be pulled rapidly and released slowly for smooth clutch operation. (Refer to the engine starting procedures for a description of the ignition circuit cut-off system.)

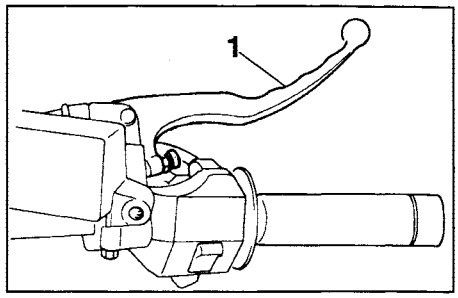


1. Shift pedal

EAU00157

Shift pedal

This motorcycle is equipped with a constant-mesh 5-speed transmission.
The shift pedal is located on the left side of the engine and is used in combination with the clutch when shifting.

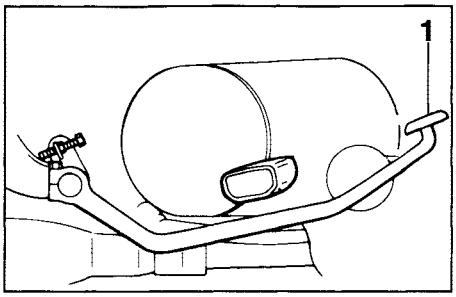


1. Front brake lever

EAU00158

Front brake lever

The front brake lever is located on the right handlebar. Pull it toward the handlebar to apply the front brake.

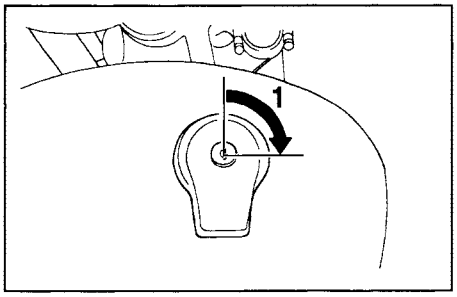


1. Rear brake pedal

EAU00162

Rear brake pedal

The rear brake pedal is on the right side of the motorcycle. Press down on the brake pedal to apply the rear brake.



1. Open

EAU00167

Fuel tank cap

TO OPEN:
Insert the key and turn it 1/4 turn clockwise. The lock will be released and the cap can be opened.

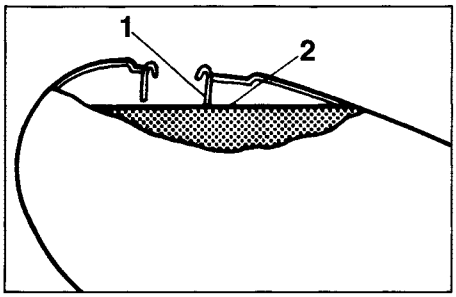
TO CLOSE:
Push the tank cap into position with the key inserted. To remove the key, turn it counterclockwise to the original position.

NOTE:
This tank cap cannot be closed unless the key is in the lock. The key cannot be removed if the cap is not locked properly.

EW000023

⚠ WARNING

Be sure the cap is properly installed and locked in place before riding the motorcycle.



1. Filler tube
2. Fuel level

EAU01183

Fuel

Make sure there is sufficient fuel in the tank. Fill the fuel tank to the bottom of the filler tube as shown in the illustration.

EW000130

⚠ WARNING

Do not overfill the fuel tank. Avoid spilling fuel on the hot engine. Do not fill the fuel tank above the bottom of the filler tube or it may overflow when the fuel heats up later and expands.

EAU00185

CAUTION:

Always wipe off spilled fuel immediately with a dry and clean soft cloth. Fuel may deteriorate painted surfaces or plastic parts.

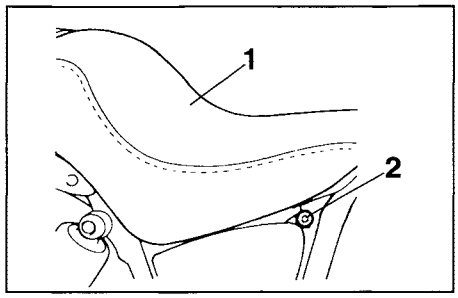
EAU00189

Recommended fuel:
UNLEADED FUEL
Fuel tank capacity:
Total:
16.8 L (3.7 Imp gal, 4.4 US gal)
Reserve:
3.0 L (0.7 Imp gal, 0.8 US gal)

Your Yamaha engine has been designed to use regular unleaded gasoline with a pump octane number ([R+M]/2) of 86 or higher, or research octane number of 91 or higher. If knocking or pinging occurs, use a different brand of gasoline or premium unleaded fuel. Unleaded fuel will give you longer spark plug life and reduced maintenance cost. If unleaded gasoline is not available, then leaded regular gasoline can be used.

Gasohol

There are two types of gasohol; gasohol containing ethanol and that containing methanol. Gasohol containing ethanol can be used if ethanol content does not exceed 10%. Gasohol containing methanol is not recommended by Yamaha because it can cause fuel system damage or vehicle performance problems.

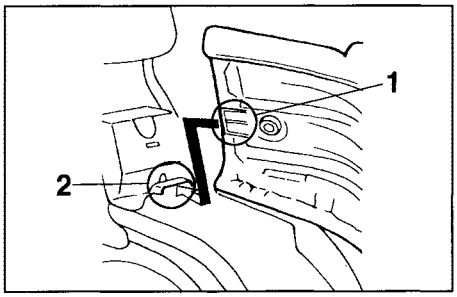


1. Seat
2. Bolt

EAU01112

Seat removal

To remove the seat, remove the bolts.

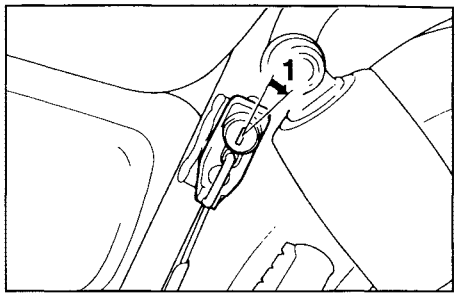


1. Projection
2. Seat holder

To reinstall the seat, insert the projection on the rear of the seat into the seat holder, then tighten the bolts.

NOTE:

Make sure that the seat is securely fitted.



1. Open

EAU00260

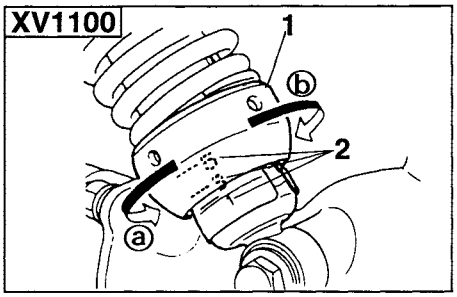
Helmet holder

To open the helmet holder, insert the key in the lock and turn it as shown. To lock the helmet holder, replace the holder in its original position.

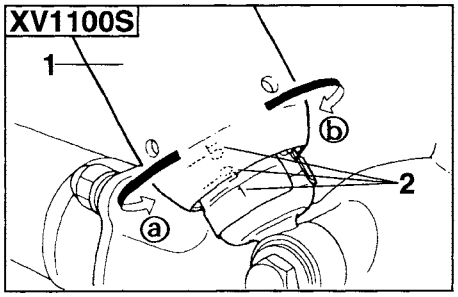
EW000030

⚠ WARNING

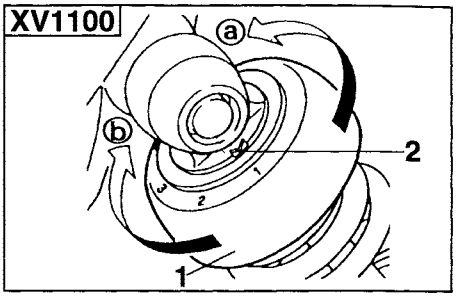
Never ride with a helmet in the helmet holder. The helmet may hit objects, causing loss of control and possibly an accident.



1. Spring preload adjuster
2. Setting mark



1. Spring preload adjuster
2. Setting mark



1. Damping force adjuster
2. Position indicator

EAU01108

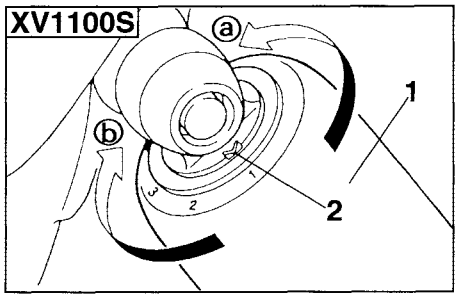
Rear shock absorber adjustment

The rear shock absorbers are equipped with spring preload and damping force adjusters.

1. Adjust spring preload as follows:
   Turn the adjuster in direction ⓐ to increase spring preload and in direction ⓑ to decrease spring preload. Make sure to align the adjuster's bottom edge with the appropriate setting on the shock absorber.

Minimum: 1 (soft) Standard: 1 Maximum: 5 (hard)

2. Adjust damping force as follows:
   Turn the adjuster in direction ⓐ to increase damping force and in direction ⓑ to decrease damping force. Make sure to align the appropriate setting with the position indicator.



1. Damping force adjuster
2. Position indicator

Minimum: 1 (soft) Standard: 1 Maximum: 4 (hard)

EW000040

⚠ WARNING

Always adjust each shock absorber to the same setting. Uneven adjustment can cause poor handling and loss of stability.

EAU00330

Sidestand

This model is equipped with an ignition circuit cut-off system. The motorcycle must not be ridden when the sidestand is down. The sidestand is located on the left side of the frame. (Refer to page 5-1 for an explanation of this system.)

EW000044

⚠ WARNING

This motorcycle must not be operated with the sidestand in the down position. If the stand is not properly retracted, it could contact the ground and distract the operator, resulting in a possible loss of control. Yamaha has designed into this motorcycle a lockout system to assist the operator in fulfilling the responsibility of retracting the sidestand. Please check carefully the operating instructions listed below and if there is any indication of a malfunction, return the motorcycle to a Yamaha dealer immediately for repair.

EAU00332

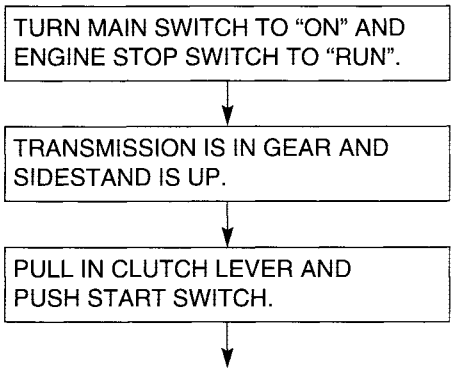
Sidestand/clutch switch operation check

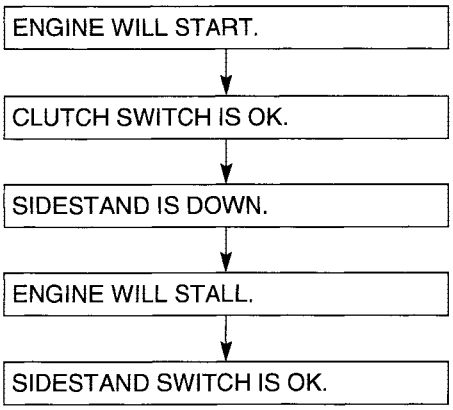
Check the operation of the sidestand switch and clutch switch against the information below.

EW000046

⚠ WARNING

- **Be sure to use the centerstand during this inspection.**
- **If improper operation is noted, consult a Yamaha dealer.**


TURN MAIN SWITCH TO "ON" AND ENGINE STOP SWITCH TO "RUN".
TRANSMISSION IS IN GEAR AND SIDESTAND IS UP.
PULL IN CLUTCH LEVER AND PUSH START SWITCH.



PRE-OPERATION CHECKS

Pre-operation check list..... 4-1

PRE-OPERATION CHECKS

EAU01114

Owners are personally responsible for their vehicle's condition. Your motorcycle's vital functions can start to deteriorate quickly and unexpectedly, even if it remains unused (for instance, if it is exposed to the elements). Any damage, fluid leak or loss of tire pressure could have serious consequences. Therefore, it is very important that, in addition to a thorough visual inspection, you check the following points before each ride.

EAU00340

PRE-OPERATION CHECK LIST

No.	ITEM	ROUTINE	PAGE
1	**Front brake**	• Check operation, free play, fluid level and brake fluid leakage. • Fill with DOT 4 (or DOT 3) brake fluid if necessary.	3-9 ~ 3-10 6-19 ~ 6-22
	Rear brake	• Check operation and free play. • Adjust if necessary.	
2	**Clutch**	• Check operation, condition and free play. • Adjust if necessary.	3-9, 6-18
3	**Engine oil**	• Check oil level. • Fill with oil if necessary.	6-8 ~ 6-10
4	**Final gear oil**	• Check vehicle for leakage.	6-11 ~ 6-12
5	**Throttle grip housing**	• Check for smooth operation. • Lubricate if necessary.	6-14, 6-23
6	**Battery**	• Check fluid level. • Fill with distilled water if necessary.	6-26 ~ 6-27
7	**Lights, signals and switches**	• Check for proper operation.	6-29 ~ 6-30
8	**Wheels and Tires**	• Check tire pressure, wear and damage.	6-15 ~ 6-17 6-31 ~ 6-35
9	**Chassis fasteners**	• Make sure that all nuts, bolts and screws are properly tightened. • Tighten if necessary.	–

PRE-OPERATION CHECKS

NOTE:

Pre-operation checks should be made each time the motorcycle is used. Such an inspection can be accomplished in a very short time and the added safety it assures is more than worth the time involved.

⚠ WARNING

1. **The engine exhaust pipe(s), and muffler(s) will be very hot after the engine has been run. Be careful not to touch them or to allow any clothing item to contact them during inspection or repair.**
2. **If any item in the PRE-OPERATION CHECK is not working properly, have it inspected and repaired before operating the motorcycle.**

OPERATION AND IMPORTANT RIDING POINTS

Starting and warming up a cold engine 5-1
Starting a warm engine 5-4
Shifting 5-5
To start out and accelerate 5-5
To decelerate 5-6
Recommended shift point 5-6
Engine break-in 5-6
Parking 5-7

OPERATION AND IMPORTANT RIDING POINTS

EAU00372

EAU00373

⚠ WARNING

1. **Before riding this motorcycle, become thoroughly familiar with all operating controls and their functions. Consult a Yamaha dealer regarding any control or function that you do not thoroughly understand.**
2. **Never start your engine or let it run for any length of time in a closed area. The exhaust fumes are poisonous and can cause loss of consciousness and death within a short time. Always operate your motorcycle in an area with adequate ventilation.**
3. **Before starting out, always be sure the sidestand is up. Failure to retract the sidestand completely can result in a serious accident when you try to turn a corner.**

EAU00376

CAUTION:

1. **Be careful where you store personal items on the motorcycle. Avoid blocking the air cleaner intake or performance will suffer.**
2. **Be careful not to put anything near the battery and its terminals. Electrical failure and acid corrosion may result.**

EAU01164

Starting and warming up a cold engine

NOTE:

This motorcycle is equipped with an ignition circuit cut-off system.

The engine can be started only under the following conditions:

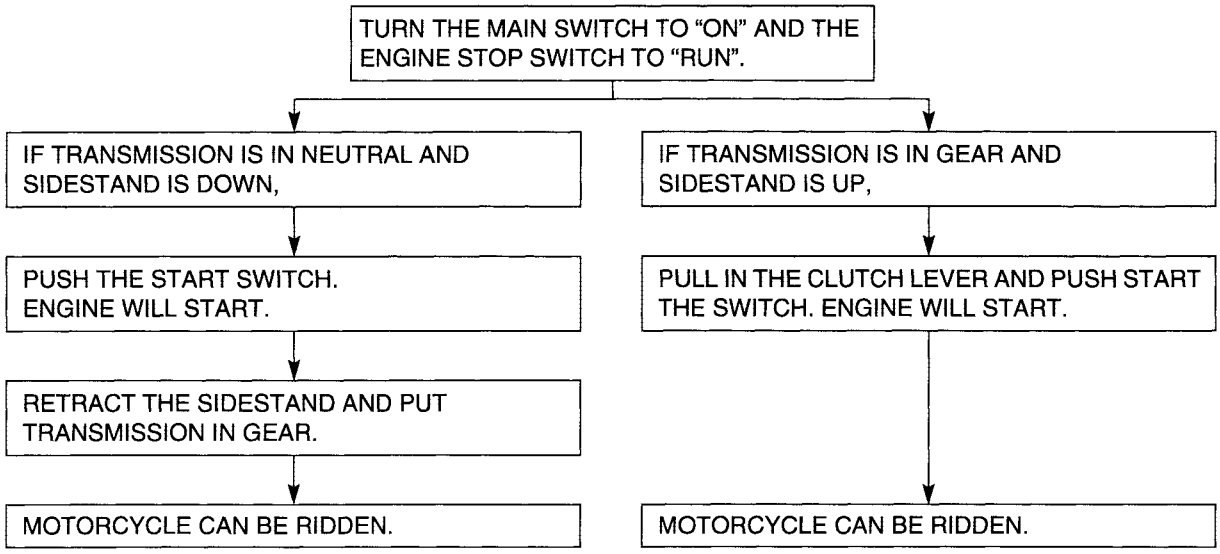
a. The transmission is in neutral.
b. The sidestand is up, the transmission is in gear and the clutch is disengaged.

The motorcycle must not be ridden when the sidestand is down.

EW000054

⚠ WARNING

Before going through the following steps, check the function of the sidestand switch and clutch switch. (Refer to page 3-15.)


TURN THE MAIN SWITCH TO "ON" AND THE ENGINE STOP SWITCH TO "RUN".
IF TRANSMISSION IS IN NEUTRAL AND SIDESTAND IS DOWN,
PUSH THE START SWITCH. ENGINE WILL START.
RETRACT THE SIDESTAND AND PUT TRANSMISSION IN GEAR.
MOTORCYCLE CAN BE RIDDEN.
IF TRANSMISSION IS IN GEAR AND SIDESTAND IS UP,
PULL IN THE CLUTCH LEVER AND PUSH START THE SWITCH. ENGINE WILL START.
MOTORCYCLE CAN BE RIDDEN.

1. Turn the main switch to "ON" and the engine stop switch to "RUN".

EC000035

CAUTION:

If the fuel indicator light comes on, check the fuel level. If necessary, fill the tank with fuel.

2. Shift the transmission into neutral.

NOTE:

When the transmission is in neutral, the neutral indicator light should be on. If the light does not come on, ask a Yamaha dealer to inspect it.

3. Turn on the starter (choke) and completely close the throttle grip.
4. Start the engine by pushing the start switch.

NOTE:

If the engine fails to start, release the start switch, wait a few seconds, then try again. Each attempt should be as short as possible to preserve the battery. Do not crank the engine more than 10 seconds on any one attempt.

EC000036

CAUTION:

The oil level indicator light and fuel indicator light should come on when the start switch is pushed and should go off when the start switch is released. If the oil level indicator light flickers or remains on, immediately stop the engine and check the engine oil level and for oil leakage. If necessary, fill the engine with oil and check to see that the oil level indicator light goes off. If not, consult a Yamaha dealer.

5. After starting the engine, move the starter (choke) to the warming up position.

NOTE:

For maximum engine life, always warm up the engine before starting off. Never accelerate hard with a cold engine.

6. After warming up the engine, turn off the starter (choke) completely.

NOTE:

- The engine is warm when it responds normally to the throttle with the starter turned off. To avoid the possibility of excessive exhaust emissions, never leave the starter circuit on longer than necessary. The length of time the starter is needed depends upon the ambient temperature. Warm ambient temperatures (above 10°C/50°F) require about 7 seconds of starter use. Cold ambient temperatures (below 10°C/50°F) require about 35 seconds with the starter turned on, then about 2,5 minutes with the starter in the halfway position.
- For maximum engine life, always warm up the engine before starting off. Never accelerate hard with a cold engine.

EAU01258

Starting a warm engine

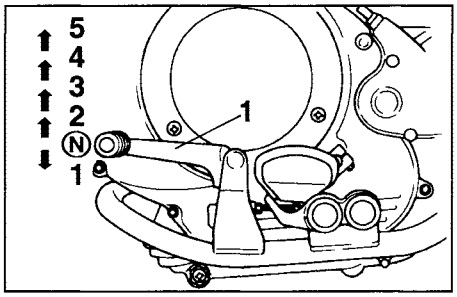
The starter (choke) is not required when the engine is warm.

EC000046

CAUTION:

See the "Engine break-in" section prior to operating the motorcycle for the first time.

OPERATION AND IMPORTANT RIDING POINTS



1. Shift pedal
N. Neutral

EAU00423

Shifting

The transmission lets you control the amount of power you have available at a given speed for starting, accelerating, climbing hills, etc. The use of the shift pedal is shown in the illustration.

To shift into neutral, depress the shift pedal repeatedly until it reaches the end of its travel, then raise the pedal slightly.

EC000048

CAUTION:

1. **Do not coast for long periods with the engine off, and do not tow the motorcycle a long distance. Even with gears in neutral, the transmission is only properly lubricated when the engine is running. Inadequate lubrication may damage the transmission.**
2. **Always use the clutch when changing gears. The engine, transmission, and driveline are not designed to withstand the shock of forced shifting and can be damaged by shifting without using the clutch.**

EAU01205

To start out and accelerate:

1. Pull the clutch lever to disengage the clutch.
2. Shift into first gear. The neutral indicator light should go out.
3. Open the throttle gradually, and at the same time, release the clutch lever slowly.
4. At the recommended shift point in the table on page 5-6, close the throttle, and at the same time, quickly pull in the clutch lever.
5. Shift into second gear. (Be careful not to shift into neutral.)
6. Open the throttle part way and gradually release the clutch lever.
7. Follow the same procedure when shifting to the next higher gear. Always shift gears at the recommended shift points.

EAU00427

To decelerate:

1. Apply both the front and the rear brakes at the same time to slow the motorcycle.
2. When the motorcycle reaches 25 km/h (15.5 mi/h), shift into first gear. Any time the engine is about to stall or runs very roughly, pull in the clutch and use the brakes to stop.
3. When the motorcycle is almost completely stopped, shift into neutral. The neutral indicator light should come on.

EAU00429

Recommended shift point

	Acceleration shift point km/h (mi/h)	Deceleration shift point km/h (mi/h)
1st → 2nd	20 (12.5)	25 (15.5)
2nd → 3rd	30 (19)	25 (15.5)
3rd → 4th	40 (25)	25 (15.5)
4th → 5th	50 (31)	25 (15.5)

EAU00436

Engine break-in

There is never a more important period in the life of your motorcycle than the period between zero and 1,000 km (600 mi). For this reason we ask that you carefully read the following material. Because the engine is brand new, you must not put an excessive load on it for the first 1,000 km (600 mi). The various parts in the engine wear and polish themselves to the correct operating clearances. During this period, prolonged full throttle operation, or any condition which might result in excessive heating of the engine, must be avoided.

EAU00442

1. 0 ~ 150 km (0 ~ 90 mi):
   Avoid operation above 4,000 r/min. Stop the engine and let it cool for 5 to 10 minutes after every hour of operation. Vary the speed of the motorcycle from time to time. Do not operate it at one set throttle position.
2. 150 ~ 500 km (90 ~ 300 mi):
   Avoid prolonged operation above 5,000 r/min. Rev the motorcycle freely through the gears, but do not use full throttle at any time.
3. 500 ~ 1,000 km (300 ~ 600 mi):
   Avoid prolonged full throttle operation. Avoid cruising speeds in excess of 6,000 r/min.
4. 1,000 km (600 mi) and beyond:
   Full throttle can be used.

EC000056

CAUTION:

After 1,000 km (600 mi) of operation, be sure to replace the engine oil, oil filter and final gear oil.

EC000053

CAUTION:

- **Never let engine speeds enter the red zone.**
- **If any engine trouble should occur during the break-in period, consult a Yamaha dealer immediately.**

EAU00460

Parking

When parking the motorcycle, stop the engine and remove the ignition key.

EW000058

⚠ WARNING

The exhaust system is hot. Park the motorcycle in a place where pedestrians or children are not likely to touch the motorcycle. Do not park the motorcycle on a slope or soft ground; the motorcycle may overturn.

PERIODIC MAINTENANCE AND MINOR REPAIR

Periodic maintenance 6-1
Tool kit 6-1
Periodic maintenance chart for emission control system 6-3
General maintenance and lubrication chart 6-4
Spark plug inspection 6-7
Canister (for California only) 6-8
Engine oil 6-8
Final gear oil 6-11
Air filter 6-12
Carburetor adjustment 6-14
Throttle cable free play inspection 6-14
Valve clearance adjustment 6-14
Tires 6-15
Cast wheels 6-17
Accessories or replacement parts 6-17
Clutch lever free play adjustment 6-18
Front brake lever free play adjustment 6-19
Rear brake pedal height and free play adjustment 6-19
Brake light switch adjustment 6-20
Checking the front brake pads and rear brake shoes 6-21
Inspecting the brake fluid level 6-21
Brake fluid replacement 6-22
Cable inspection and lubrication 6-23
Throttle cable and grip lubrication 6-23
Brake and shift pedal lubrication 6-23
Brake and clutch lever lubrication 6-24
Center and sidestand lubrication 6-24
Rear suspension lubrication 6-24
Front fork inspection 6-25
Steering inspection 6-25
Wheel bearings 6-26
Battery 6-26
Fuse replacement 6-28
Headlight bulb replacement 6-29
Front wheel removal 6-31
Front wheel installation 6-33
Rear wheel removal 6-33
Rear wheel installation 6-35
Troubleshooting 6-35
Troubleshooting chart 6-36

PERIODIC MAINTENANCE AND MINOR REPAIR

EAU00462

EAU00463

Periodic inspection, adjustment, and lubrication will keep your motorcycle in the safest and most efficient condition possible. Safety is an obligation of the motorcycle owner. The most important points of motorcycle inspection, adjustment, and lubrication are explained in the following pages.

"Maintenance, replacement, or repair of the emission control devices and systems may be performed by any repair establishment or individual using any part which is certified (if applicable)".

EW000060

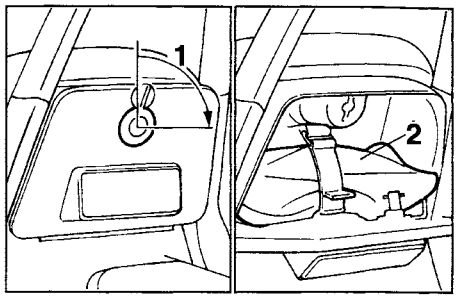
⚠ WARNING

If you are not familiar with motorcycle service, this work should be done by a Yamaha dealer.

EAU00467

PERIODIC MAINTENANCE

PROPER PERIODIC MAINTENANCE OF YOUR MOTORCYCLE IS IMPORTANT IN ORDER TO ENJOY LONG, PLEASURABLE SERVICE. ESPECIALLY IMPORTANT ARE THE MAINTENANCE SERVICES RELATED TO EMISSIONS CONTROL. THESE CONTROLS NOT ONLY FUNCTION TO ENSURE CLEANER AIR BUT ARE ALSO VITAL TO PROPER ENGINE OPERATION AND MAXIMUM PERFORMANCE. IN THE FOLLOWING TABLES OF PERIODIC MAINTENANCE, THE SERVICES RELATED TO EMISSIONS CONTROL ARE GROUPED SEPARATELY. THESE SERVICES REQUIRE SPECIALIZED DATA, KNOWLEDGE, AND EQUIPMENT. YAMAHA DEALERS ARE TRAINED AND EQUIPPED TO PERFORM THESE PARTICULAR SERVICES.



1. Open
2. Tool kit

EAU00468

Tool kit

The service information included in this manual is intended to provide you, the owner, with the necessary information for completing some of your own preventive maintenance and minor repairs. The tools provided in the owner's tool kit are to assist you in the performance of periodic maintenance. However, some other tools such as a torque wrench are also necessary to perform the maintenance correctly.

NOTE:
If you do not have necessary tools required during a service operation, take your motorcycle to a Yamaha dealer for service.

EW000062

⚠ WARNING

Modifications to this motorcycle not approved by Yamaha may cause loss of performance, excessive emissions, and render it unsafe for use. Consult a Yamaha dealer before attempting any changes.

PERIODIC MAINTENANCE AND MINOR REPAIR

EAU00471

PERIODIC MAINTENANCE CHART FOR EMISSION CONTROL SYSTEM

No.		ITEM	REMARKS	INITIAL	ODOMETER READINGS				
				1,000 km (600 mi) or 1 month	7,000 km (4,400 mi) or 7 months	13,000 km (8,200 mi) or 13 months	19,000 km (12,000 mi) or 19 months	25,000 km (15,800 mi) or 25 months	31,000 km (19,600 mi) or 31 months
1	*	**Valve clearance**	• Check and adjust valve clearance when engine is cold.	√	√	√	√	√	√
2		**Spark plug**	• Check condition. • Adjust gap and clean. • Replace at 13,000 km (8,200 mi) or 13 months and thereafter every 12,000 km (7,600 mi) or 12 months.		√	Replace	√	Replace	√
3	*	**Crankcase ventilation system**	• Check ventilation hose for cracks or damage. • Replace if necessary.		√	√	√	√	√
4	*	**Fuel line**	• Check fuel hose and vacuum pipe for cracks or damage. • Replace if necessary.		√	√	√	√	√
5	*	**Exhaust system**	• Check for leakage. • Retighten if necessary. • Replace gasket(s) if necessary.		√	√	√	√	√
6	*	**Carburetor synchronization**	• Adjust synchronization of carburetors.	√	√	√	√	√	√
7	*	**Idle speed**	• Check and adjust engine idle speed. • Adjust cable free play.		√	√	√	√	√
8	*	**Evaporative emission control system****	• Check control system for damage. • Replace if necessary.				√		√

* Since these items require special tools, data and technical skills, they should be serviced by a Yamaha dealer.
** California only.

EAU00472

GENERAL MAINTENANCE AND LUBRICATION CHART

No.		ITEM	REMARKS	TYPE	INITIAL	ODOMETER READINGS				
					1,000 km (600 mi) or 1 month	7,000 km (4,400 mi) or 7 months	13,000 km (8,200 mi) or 13 months	19,000 km (12,000 mi) or 19 months	25,000 km (15,800 mi) or 25 months	31,000 km (19,000 mi) or 31 months
1		**Engine oil**	• Warm-up engine before draining.	See page 8-1.	√	√	√	√	√	√
2	*	**Oil filter**	• Replace	-	√		√		√	
3	*	**Air filter**	• Clean with compressed air. • Replace if necessary.	-		√	√	√	√	√
4	*	**Brake system**	• Adjust free play. • Replace pads if necessary. (Front) • Replace shoes if necessary. (Rear)	-	√	√	√	√	√	√
5	*	**Clutch**	• Adjust free play.		√	√	√	√	√	√
6	*	**Final gear oil**	• Check oil level and leakage. • Replace every 24,000 km (15,000 mi) or 24 months.	SAE 80 API "GL-4" hypoid gear oil	Replace		Check		√	
7		**Control and meter cable**	• Apply chain lube thoroughly.	Yamaha chain and cable lube or SAE 10W30 motor oil	√	√	√	√	√	√
8	*	**Rear arm pivot bearing**	• Check bearing assembly for looseness. • Moderately repack every 24,000 km (15,000 mi) or 24 months.	Lithium soap base grease					Repack	

No.		ITEM	REMARKS	TYPE	INITIAL	ODOMETER READINGS				
					1,000 km (600 mi) or 1 month	7,000 km (4,400 mi) or 7 months	13,000 km (8,200 mi) or 13 months	19,000 km (12,000 mi) or 19 months	25,000 km (15,800 mi) or 25 months	31,000 km (19,000 mi) or 31 months
9		**Brake/Clutch lever pivot shaft**	• Apply chain lube lightly.	Yamaha chain and cable lube or SAE 10W30 motor oil		√	√	√	√	√
10		**Brake pedal and shift pedal shaft**	• Lubricate. • Apply chain lube lightly.	Yamaha chain and cable lube or SAE 10W30 motor oil		√	√	√	√	√
11	*	**Center/ Side-stand pivots**	• Check operation and lubricate. • Apply chain lube lightly.	Yamaha chain and cable lube or SAE 10W30 motor oil		√	√	√	√	√
12	*	**Front fork**	• Check operation and leakage.	-		√	√	√	√	√
13	*	**Steering bearings**	• Check bearing assembly for looseness. • Moderately repack every 24,000 km (15,000 mi) or 24 months.	Lithium soap base grease.		√	√	√	Repack	√
14	*	**Wheel bearings**	• Check bearing for smooth rotation.	-		√	√	√	√	√
15		**Battery**	• Check specific gravity and breather pipe for proper operation.	-		√	√	√	√	√
16	*	**Sidestand switch**	• Check and clean or replace if necessary.	-	√	√	√	√	√	√

* Since these items require special tools, data and technical skills, they should be serviced by a Yamaha dealer.

EAU00476

NOTE:

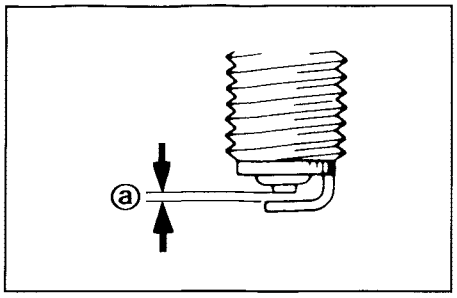
For odometer readings or time periods higher than 31,000 km (19,000 mi) or 31 months, repeat the same maintenance as listed in the chart from the 7,000 km (4,400 mi) or 7 month interval.

EAU00477

NOTE:

- The air filter needs more frequent service if you are riding in unusually wet or dusty areas.
- Brake fluid replacement

1. When disassembling the master cylinder or caliper cylinder, always replace the brake fluid. Check the brake fluid level regularly and fill as required.
2. Replace the oil seals on the inner parts of the master cylinder and caliper cylinder every two years.
3. Replace the brake hoses every four years or if cracked or damaged.



a. Spark plug gap

EAU00496

Spark plug inspection

The spark plug is an important engine component and is easy to inspect. The condition of the spark plug can indicate the condition of the engine.

Normally, all spark plugs from the same engine should have the same color on the white insulator around the center electrode. The ideal color at this point is a medium-to-light tan color for a motorcycle that is being ridden normally. If one spark plug shows a distinctly different color, there could be something wrong with the engine.

Do not attempt to diagnose such problems yourself. Instead, take the motorcycle to a Yamaha dealer. You should periodically remove and inspect the spark plugs because heat and deposits will cause any spark plug to slowly break down and erode. If electrode erosion becomes excessive, or if carbon and other deposits are excessive, you should replace the spark plug with the specified plug.

Specified spark plug:
BPR7ES (NGK) or
W22EPR-U (DENSO)

Before installing any spark plug, measure the electrode gap with a wire thickness gauge. Adjust the gap to specification.

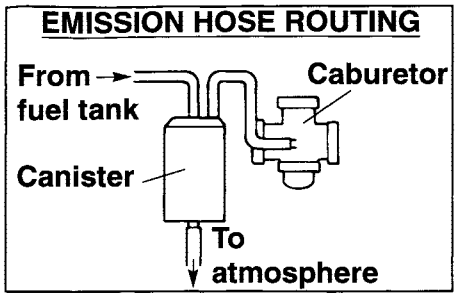
Spark plug gap:
0.7 ~ 0.8 mm (0.028 ~ 0.031 in)

When installing the spark plug, always clean the gasket surface and use a new gasket. Wipe off any grime from the threads and tighten the spark plug to the specified torque.

Tightening torque:
Spark plug:
20 Nm (2.0 m·kg, 14.5 ft·lb)

NOTE:

If a torque wrench is not available when you are installing a spark plug, a good estimate of the correct torque is 1/4 to 1/2 turn past finger tight. Have the spark plug tightened to the specified torque as soon as possible.

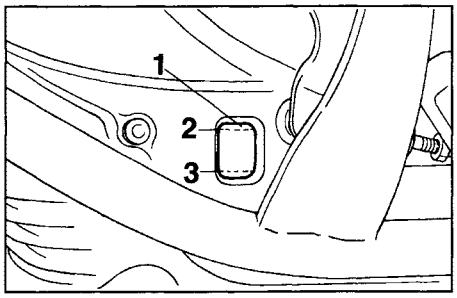


EAU00498

Canister (for California only)

This model is equipped with a canister to prevent the discharging of fuel vapor into the atmosphere. Before using this motorcycle be sure to:

1. Check each hose connection.
2. Check each hose and canister for cracks or damage. Replace if damaged.
3. Make sure the vent hose is not blocked. Clean it if necessary.



1. Oil level window
2. Maximum level mark
3. Minimum level mark

EAU00505

Engine oil

1. Oil level inspection

a. Place the motorcycle on the centerstand. Warm up the engine for several minutes.

NOTE:

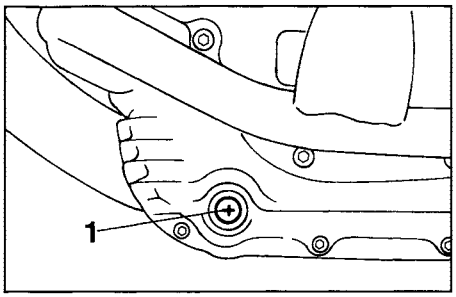
Be sure the motorcycle is positioned straight up when checking the oil level. A slight tilt toward the side can result in false readings.

b. With the engine stopped, check the oil level through the level window located at the lower part of the left side crankcase cover.

NOTE:

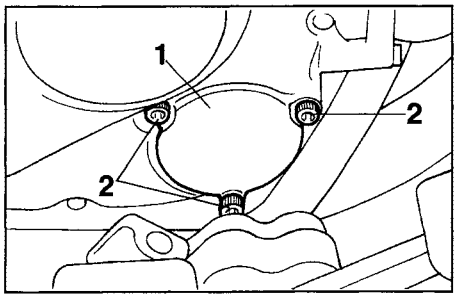
Wait a few minutes until the oil level settles before checking.

c. The oil level should be between the maximum and minimum marks. If the level is low, fill the engine with sufficient oil to raise it to the specified level.



1. Engine oil drain plug

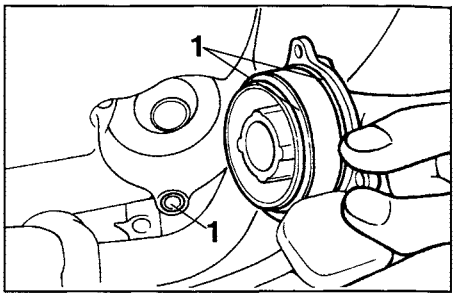
2. Engine oil and oil filter replacement
   a. Warm up the engine for a few minutes.
   b. Stop the engine. Place an oil pan under the engine and remove the oil filler cap.
   c. Remove the drain plug and drain the oil.



1. Oil filter cover
2. Bolt (× 3)

   d. Remove the oil filter cover bolts and oil filter.
   e. Reinstall the drain plug and tighten it to the specified torque.

Tightening torque:
Drain plug:
43 Nm (4.3 m·kg, 31 ft·lb)



1. O-ring (× 3)

   f. Install the new oil filter, O-rings and the filter cover. Tighten the oil filter cover bolts to the specified torque.

Tightening torque:
Oil filter cover bolt:
10 Nm (1.0 m·kg, 7.2 ft·lb)

NOTE:
Make sure the O-rings are seated properly.

g. Fill engine with oil. Install the oil filler cap and tighten.

Recommended oil:
See page 8-1.
Oil quantity:
Total amount:
3.6 L (3.2 Imp qt, 3.8 US qt)
Periodic oil change:
3.0 L (2.6 Imp qt, 3.2 US qt)
With oil filter replacement:
3.1 L (2.7 Imp qt, 3.3 US qt)

EC000066

CAUTION:

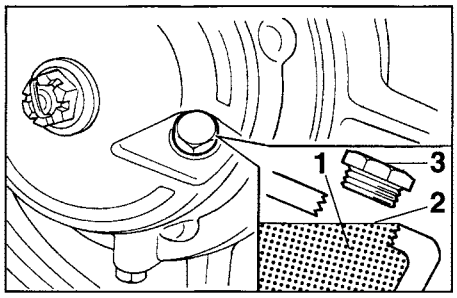
- **Do not put in any chemical additives. Engine oil also lubricates the clutch and additives could cause clutch slippage.**
- **Be sure no foreign material enters the crankcase.**

h. Start the engine and warm up for a few minutes. While warming up, check for oil leakage. If oil leakage is found, stop the engine immediately, and check for the cause.
i. After the engine is started, the oil level indicator light should go off if oil is filled to specified level.

EC000067

CAUTION:

If the indicator light flickers or remains on, immediately stop the engine and consult with a Yamaha dealer.



1. Final gear oil
2. Correct level
3. Final gear oil filler bolt

EAU01109

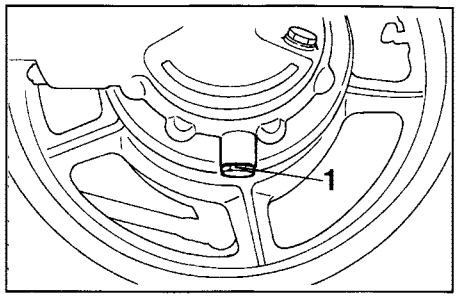
Final gear oil

EW000066

⚠ WARNING

Do not let foreign material enter the final gear case. Be sure oil does not get on the tire or wheel.

1. Oil level inspection
   a. Place the motorcycle on a level place and place it on the center-stand. The engine should be cool at ambient temperature.
   b. Remove the oil filler bolt and check the oil level. The oil level should be at the brim of the filler hole. Add the recommended oil if necessary.



1. Final gear oil drain plug

2. Oil replacement
   a. Place an oil pan under the final gear case.
   b. Remove the oil filler bolt and the drain plug to drain the oil.
   c. Reinstall and tighten the drain plug to the specified torque.

Tightening torque:
Drain plug:
23 Nm (2.3 m·kg, 17 ft·lb)

d. Fill the gear case to the brim of the hole with the recommended oil.

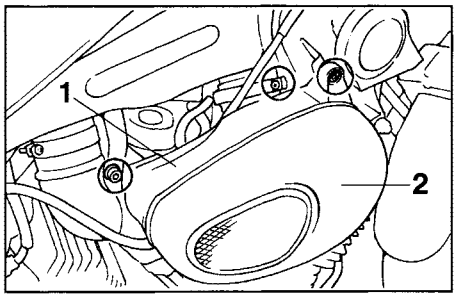
Final gear case capacity:
0.2 L (0.18 Imp qt, 0.21 US qt)
Recommended oil:
SAE 80 API GL-4 Hypoid gear oil If desired, an SAE 80W90 hypoid gear oil may be used for all conditions.

NOTE:
"GL-4" is a quality and additive rating. Hypoid gear oils rated "GL-5" or "GL-6" may also be used.

e. Reinstall and tighten the filler bolt to the specified torque.

Tightening torque:
Oil filler bolt:
23 Nm (2.3 m·kg, 17 ft·lb)

f. After replacing the final gear oil, be sure to check for oil leakage.



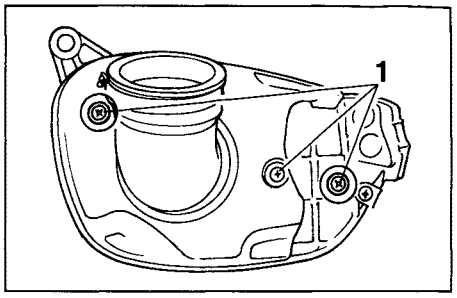
1. Air filter case assembly
2. Air filter case cover

EAU01404

Air filter

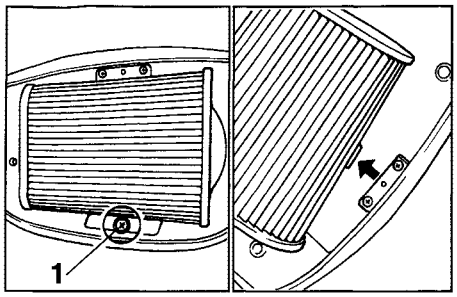
The air filter should be cleaned at the specified intervals. It should be cleaned more frequently if you are riding in unusually wet or dusty areas.

1. Remove the air filter case assembly.



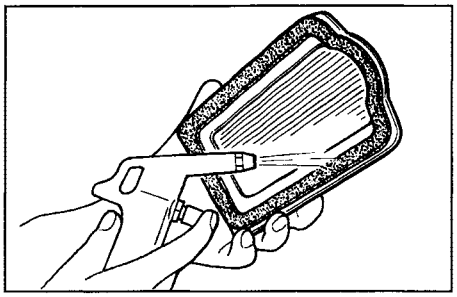
1. Screw (× 3)

2. Remove the air filter case cover.

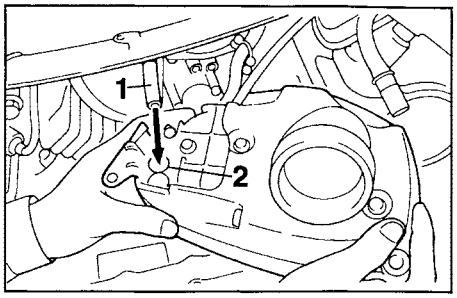


1. Screw

3. Remove the air filter.



4. Tap the air filter lightly to remove most of the dust and dirt and blow out the remaining dirt with compressed air as shown. If the air filter is damaged, replace it.
5. Reassemble by reversing the removal procedure.



1. Hose
2. Hole

NOTE:

Be sure to connect the hose from the carburetor to the lower hole in the air filter case.

EC000082

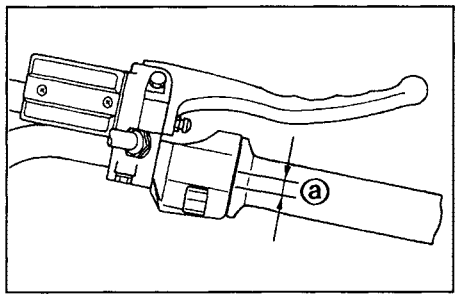
CAUTION:

- **Make sure the air filter is properly seated in the air filter case.**
- **The engine should never be run without the air filter installed. Excessive piston and/or cylinder wear may result.**

EAU00628

Carburetor adjustment

The carburetors are important parts of the engine and emission control system. Adjusting should be left to a Yamaha dealer with the professional knowledge, specialized data and equipment to do so properly.



a. Free play

EAU00635

Throttle cable free play inspection

There should be a free play of 3 ~ 5 mm (0.12 ~ 0.2 in) at the throttle grip. If the free play is incorrect, ask a Yamaha dealer to make this adjustment.

EAU00637

Valve clearance adjustment

The correct valve clearance changes with use, resulting in improper fuel/air supply or engine noise. To prevent this, the valve clearance must be adjusted regularly. This adjustment however, should be left to a professional Yamaha service technician.

EAU00645

Tires

To ensure maximum performance, long service, and safe operation, note the following:

1. Tire air pressure
   Always check and adjust the tire pressure before operating the motorcycle.

EW000082

⚠ WARNING

Tire inflation pressure should be checked and adjusted when the temperature of the tire equals the ambient air temperature. Tire inflation pressure must be adjusted according to total weight of cargo, rider, passenger, and accessories (fairing, saddlebags, etc. if approved for this model), and vehicle speed.

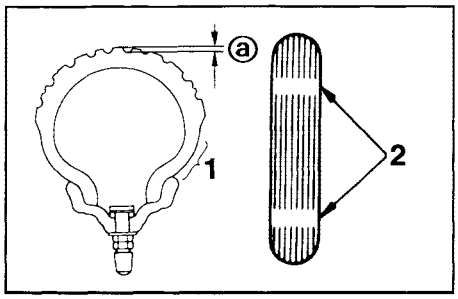
Maximum load*:	231 kg (509 lb)	
Cold tire pressure:	Front	Rear
Up to 90 kg (198 lb) load*	200 kPa (2.00 kgf/cm^2, 29 psi)	225 kPa (2.25 kgf/cm^2, 33 psi)
90 kg (198 lb) load ~ Maximum load*	200 kPa (2.00 kgf/cm^2, 29 psi)	250 kPa (2.50 kgf/cm^2, 36 psi)

* Load is the total weight of cargo, rider, passenger, and accessories.

EW000083

⚠ WARNING

Proper loading of your motorcycle is important for several characteristics of your motorcycle, such as handling, braking, performance and safety. Do not carry loosely packed items that can shift. Securely pack your heaviest items close to the center of the motorcycle, and distribute the weight evenly from side to side. Properly adjust the suspension for your load, and check the condition and pressure of your tires. NEVER OVERLOAD YOUR MOTORCYCLE. Make sure the total weight of the cargo, rider, passenger, and accessories (fairing, saddlebags, etc. if approved for this model) does not exceed the maximum load of the motorcycle. Operation of an overloaded motorcycle could cause tire damage, an accident, or even injury.



a. Tread depth
1. Side wall
2. Wear indicator

2. Tire inspection
Always check the tires before operating the motorcycle. If a tire tread shows crosswise lines (minimum tread depth), if the tire has a nail or glass fragments in it, or if the side wall is cracked, contact a Yamaha dealer immediately and have the tire replaced.

FRONT:

Manufacturer	Size	Type
Bridgestone	100/90-19 57H	G535
Dunlop	100/90-19 57H	F17

REAR:

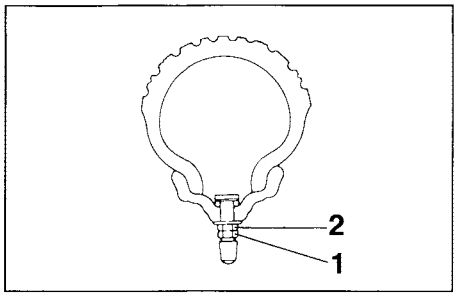
Manufacturer	Size	Type
Bridgestone	140/90-15M/C 70H	G536
Dunlop	140/90-15M/C 70H	K425

Minimum tire tread depth (front and rear)	1.0 mm (0.04 in)

EAU00682

⚠ WARNING

It is dangerous to ride with a worn-out tire. When a tire tread begins to show lines, have a Yamaha dealer replace the tire immediately. Brakes, tires and related wheel parts replacement should also be left to a Yamaha dealer.



1. Lower
2. Upper

EAU00689

Cast wheels

To ensure maximum performance, long service, and safe operation, note the following:

1. Always inspect the wheels before a ride. Check for cracks, bends or warpage of the wheels. If any abnormal condition exists in a wheel, consult a Yamaha dealer. Do not attempt even small repairs to the wheel. If a wheel is deformed or cracked, it must be replaced.
2. Tires and wheels should be balanced whenever either one is changed or replaced. Failure to have a wheel balanced can result in poor performance, adverse handling characteristics and shortened tire life.
3. Ride at moderate speeds after changing a tire since the tire surface must first be broken in for it to develop its optimal characteristics.
4. After repairing or replacing a tire, tighten the valve stem locknut to the specified torque.

Tightening torque:
Valve stem locknut:
Lower:
1.5 Nm (0.15 m·kg, 1.08 ft·lb)
Upper:
0.5 Nm (0.05 m·kg, 0.36 ft·lb)

EAU00691

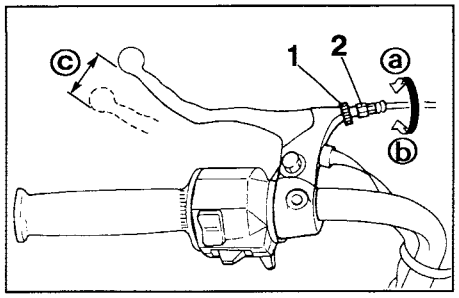
Accessories or replacement parts

EW000098

⚠ WARNING

This motorcycle is not designed to pull a trailer or to be attached to a sidecar. The accessories or replacement parts you choose for your motorcycle should be designed specifically for it, and they must be securely mounted to maintain the inherent stability of the original design. Genuine Yamaha Parts and Accessories are designed and tested to be compatible with your motorcycle. Please consider Genuine Yamaha Parts and Accessories before making an accessory purchase. Use of non-Yamaha-approved parts or accessories may cause loss of handling stability and riding safety. Since Yamaha cannot control the quality of parts or accessories manufactured by other companies, Yamaha cannot be held liable for

any consequences caused by the use of items which have not been approved by Yamaha.



1. Locknut
2. Adjusting bolt
c. Free play

EAU00692

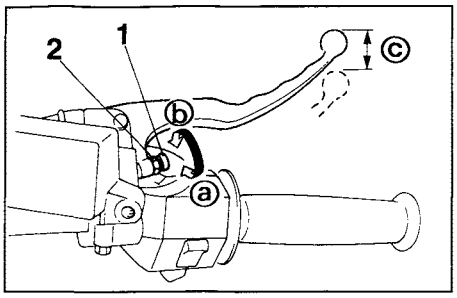
Clutch lever free play adjustment

The clutch lever free play should be adjusted to 8 ~ 12 mm (0.31 ~ 0.47 in). If the free play is incorrect, adjust as follows.

1. Loosen the locknut.
2. Turn the adjusting bolt at the clutch lever in direction ⓐ to increase free play or in direction ⓑ to decrease free play.
3. Tighten the locknut.

NOTE:

If proper adjustment cannot be obtained or the clutch does not work correctly, ask a Yamaha dealer to inspect the internal clutch mechanism.



1. Adjusting bolt
2. Locknut
c. Free play

EAU00696

Front brake lever free play adjustment

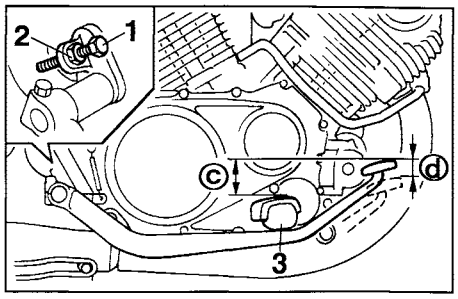
The free play at the front brake lever should be 2 ~ 5 mm (0.08 ~ 0.2 in).

1. Loosen the locknut.
2. Turn the adjusting bolt in direction ⓐ to increase free play or in direction ⓑ to decrease free play.
3. After adjusting, tighten the locknut.

EW000099

⚠ WARNING

- **Check the brake lever free play. Be sure the brake is working properly.**
- **A soft or spongy feeling in the brake lever can indicate the presence of air in the brake system. This air must be removed by bleeding the brake system before the motorcycle is operated. Air in the system will cause greatly diminished braking capability and can result in loss of control and an accident. Have a Yamaha dealer inspect and bleed the system if necessary.**



1. Adjusting bolt
2. Locknut
3. Footrest
c. Pedal height
d. Free play

EAU00711

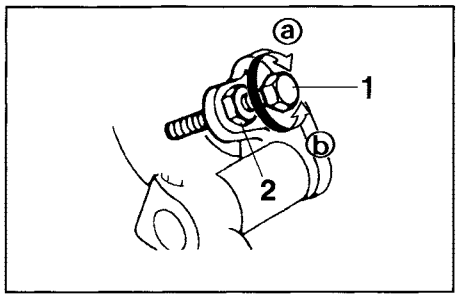
Rear brake pedal height and free play adjustment

EW000104

⚠ WARNING

It is advisable to have a Yamaha dealer make this adjustment.

The brake pedal height should be adjusted before adjusting the brake pedal free play.



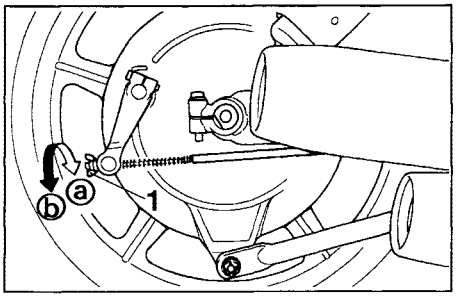
1. Adjusting bolt
2. Locknut

1. Pedal height
   The brake pedal should be positioned approximately 40 mm (1.6 in) above the top of the footrest.
   a. Loosen the locknut.
   b. Turn the adjusting bolt in direction ⓐ to raise pedal height or in direction ⓑ to lower pedal height.
   c. Tighten the locknut.

EW000105

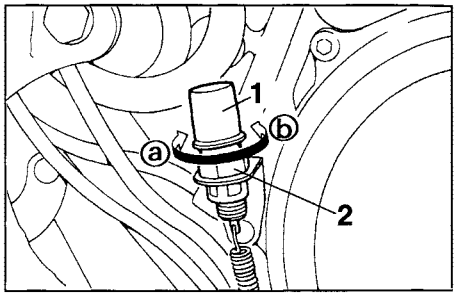
⚠ WARNING

After adjusting the pedal height adjust brake pedal free play.



1. Adjusting nut

2. Free play
   The brake pedal free play should be adjusted to 20 ~ 30 mm (0.8 ~ 1.2 in) at the brake pedal end. Turn the adjusting nut on the brake rod in direction ⓐ to increase free play or in direction ⓑ to decrease free play.

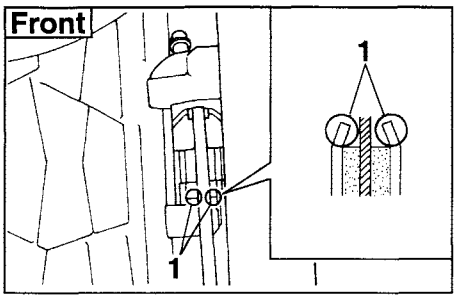


1. Brake light switch
2. Adjusting nut

EAU00713

Brake light switch adjustment

The rear brake light switch is activated by the brake pedal and is properly adjusted when the brake light comes on just before braking takes effect. To adjust the rear brake light switch, hold the switch body so it does not rotate while turning the adjusting nut. Turn the adjusting nut in direction ⓐ to make the brake light come on earlier. Turn the adjusting nut in direction ⓑ to make the brake light come on later.



1. Wear indicator

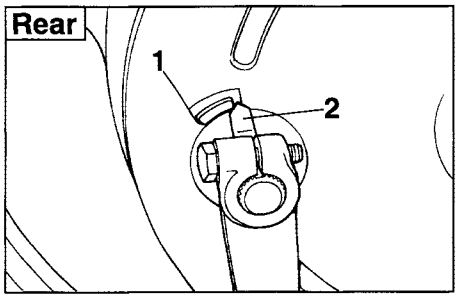
EAU00720

Checking the front brake pads and rear brake shoes

EAU00723

FRONT

Apply the brake and inspect the wear indicator. If the wear indicator is ALMOST in contact with the disc plate, ask a Yamaha dealer to replace the pads.



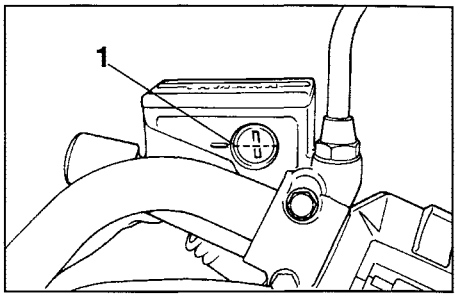
1. Wear limit
2. Wear indicator

EAU00727

REAR

Apply the brake and inspect the wear indicator.

If the indicator reaches the wear limit line, ask a Yamaha dealer to replace the shoes.



1. Minimum level mark

EAU00732

Inspecting the brake fluid level

Insufficient brake fluid may let air enter the brake system, possibly causing the brakes to become ineffective.

Before riding, check that the brake fluid is above the minimum level and fill when necessary.

Observe these precautions:

1. When checking the fluid level, make sure the top of the master cylinder is level by turning the handlebars.

2. Use only the designated quality brake fluid. Otherwise, the rubber seals may deteriorate, causing leakage and poor brake performance.

Recommended brake fluid: DOT 4

NOTE:
If DOT 4 is not available, DOT 3 can be used.

3. Refill with the same type of brake fluid. Mixing fluids may result in a harmful chemical reaction and lead to poor brake performance.
4. Be careful that water does not enter the master cylinder when refilling. Water will significantly lower the boiling point of the fluid and may result in vapor lock.
5. Brake fluid may deteriorate painted surfaces or plastic parts. Always clean up spilled fluid immediately.
6. Have a Yamaha dealer check the cause if the brake fluid level goes down.

EAU00742

Brake fluid replacement

The brake fluid should be replaced only by trained Yamaha service personnel. Have the Yamaha dealer replace the following components during periodic maintenance or when they are damaged or leaking:

a. oil seals (every two years)
b. brake hoses (every four years)

EAU00771

Cable inspection and lubrication

EW000111

⚠ WARNING

Damage to the outer housing of cables may allow internal rusting and cause interference with cable movement. Replace damaged cables as soon as possible to prevent unsafe conditions.

Lubricate the inner cable and the cable end. If it does not operate smoothly, ask a Yamaha dealer to replace them.

Recommended lubricant:
Yamaha Chain and Cable Lube or SAE 10W30 motor oil

EAU00773

Throttle cable and grip lubrication

The throttle twist grip assembly should be greased at the time that the cable is lubricated, since the grip must be removed to get at the end of the throttle cable. After removing the screws, hold the end of the cable up in the air and put in several drops of lubricant. With the throttle grip disassembled, coat the metal surface of the grip assembly with a suitable all-purpose grease.

EAU00775

Brake and shift pedal lubrication

Lubricate the pivoting parts.

Recommended lubricant:
Yamaha Chain and Cable Lube or SAE 10W30 motor oil

EAU00777

Brake and clutch lever lubrication

Lubricate the pivoting parts.

Recommended lubricant:
Yamaha Chain and Cable Lube or SAE 10W30 motor oil

EAU00786

Center and sidestand lubrication

Lubricate the pivoting and mating joints. Check to see that the center and sidestand move up and down smoothly.

Recommended lubricant:
Yamaha Chain and Cable Lube or SAE 10W30 motor oil

EW000114

⚠ WARNING

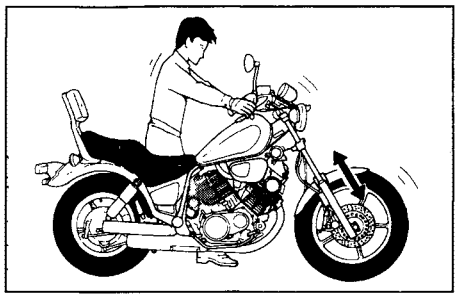
If the center and/or sidestand does not move smoothly, consult a Yamaha dealer.

EAU00791

Rear suspension lubrication

Lubricate the pivoting parts.

Recommended lubricant:
Lithium soap base grease



EAU00793

Front fork inspection

EW000115

⚠ WARNING

Securely support the motorcycle so there is no danger of it falling over.

1. Visual check
   Check for scratches or damage on the inner tube and excessive oil leakage from the front fork.
2. Operation check
   Place the motorcycle on a level place.

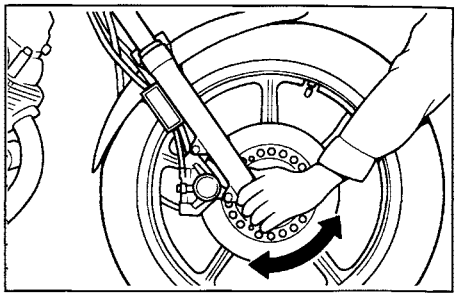
a. Hold the motorcycle in an upright position and apply the front brake.

b. Push down hard on the handlebars several times and check if the fork rebounds smoothly.

EC000098

CAUTION:

If any damage or unsmooth movement is found with the front fork, consult a Yamaha dealer.



EAU00794

Steering inspection

Periodically inspect the condition of the steering. Worn out or loose steering bearings may be dangerous. Place a stand under the engine to raise the front wheel off the ground. Hold the lower end of the front forks and try to move them forward and backward. If any free play can be felt, ask a Yamaha dealer to inspect and adjust the steering. Inspection is easier if the front wheel is removed.

EW000115

⚠ WARNING

Securely support the motorcycle so there is no danger of it falling over.

EAU01144

Wheel bearings

If there is play in the front or rear wheel hub or if the wheel does not turn smoothly, have a Yamaha dealer inspect the wheel bearings.

EAU00798

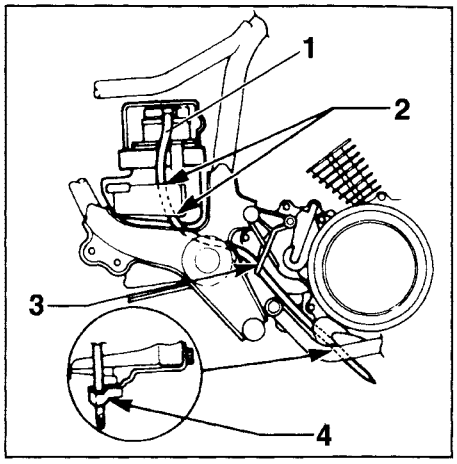
Battery

Check the level of the battery electrolyte and make sure that the terminals are tight. Fill with distilled water if the electrolyte level is low. If the motorcycle is equipped with optional electrical accessories, the battery tends to discharge more quickly, so be sure to recharge it periodically.

EC000099

CAUTION:

When inspecting the battery, be sure the breather hose is routed correctly. If the breather hose is positioned in such a way as to cause battery electrolyte or gas to exit onto the frame, structural and cosmetic damage to the motorcycle can occur.

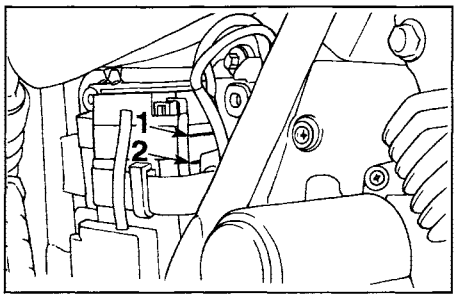


1. Battery breather hose
2. Pass through the hole
3. Pass through the cable holder
4. Pass through the clamp

EW000116

⚠ WARNING

Battery electrolyte is poisonous and dangerous, causing severe burns, etc. It contains sulfuric acid. Avoid contact with skin, eyes or clothing.
Antidote:
EXTERNAL: Flush with water.
INTERNAL: Drink large quantities of water or milk. Follow with milk of magnesia, beaten egg, or vegetable oil. Call a physician immediately.
EYES: Flush with water for 15 minutes and get prompt medical attention. Batteries produce explosive gases. Keep sparks, flame, cigarettes etc., away. Ventilate when charging or using in an enclosed space. Always shield your eyes when working near batteries.
KEEP OUT OF REACH OF CHILDREN.



1. Maximum level mark
2. Minimum level mark

Replenishing the battery fluid

A poorly maintained battery will corrode and discharge quickly. The battery fluid should be checked at least once a month. The level should be between the minimum level and maximum level marks. Use only distilled water if refilling is necessary.

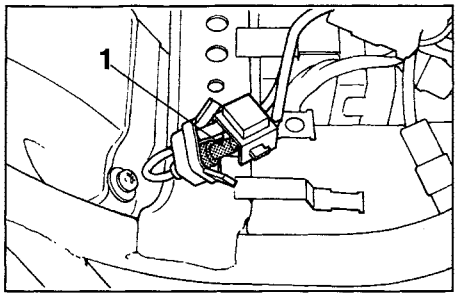
EC000100

CAUTION:

Normal tap water contains minerals which are harmful to a battery; therefore, refill only with distilled water.

Battery storage

1. When the motorcycle will not be used for a month or longer, remove the battery, fully charge it and store it in a cool, dry place. Completely recharge the battery before reinstalling.
2. If the battery will be stored for longer than two months, check the specific gravity of the fluid at least once a month and recharge the battery when it is too low.
3. Always make sure the connections are correct when putting the battery back in the motorcycle. Make sure the breather hose is properly connected and is not damaged or obstructed.



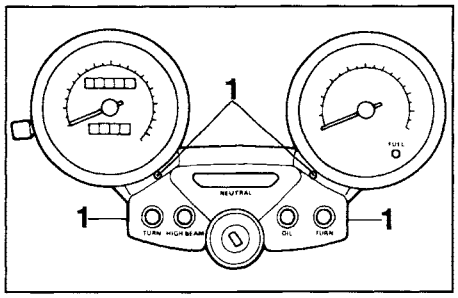
1. Main fuse

EAU01405

Fuse replacement

Main fuse case

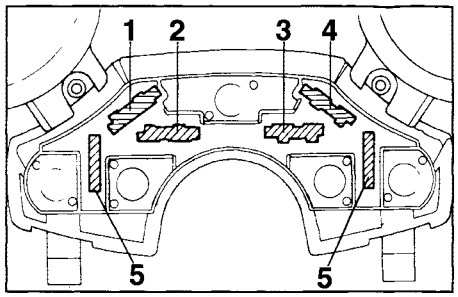
The main fuse case is located under the seat. (See page 3-12 for seat removal and installation procedures.)



1. Screw (× 4)

Sub fuse block

The sub fuse block is located under the indicator lights panel. Remove the screws and then lift upward to remove the panel.



1. Signaling system fuse
2. Ignition fuse
3. Taillight fuse
4. Headlight fuse
5. Spare fuse (× 2)

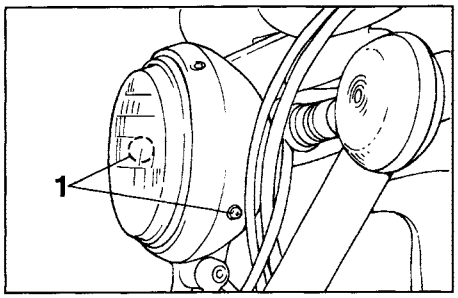
If any fuse is blown, turn off the main switch and the switch of the circuit in question. Install a new fuse of specified amperage. Turn on the switches and see if the electrical device operates. If the fuse immediately blows again, consult a Yamaha dealer.

EC000103

CAUTION:

Do not use fuses of higher amperage rating than those recommended. Substitution of a fuse of improper rating can cause extensive electrical system damage and possibly a fire.

Specified fuses:	
Main fuse:	30 A
Headlight fuse:	15 A
Taillight fuse:	10 A
Signaling system fuse:	15 A
Ignition fuse:	10 A



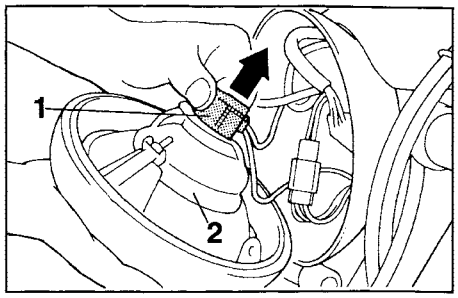
1. Screw (× 2)

EAU00833*

Headlight bulb replacement

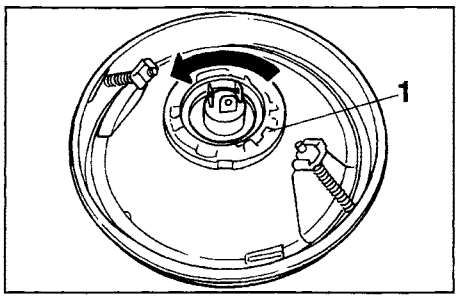
This motorcycle is equipped with a quartz bulb headlight.
If the headlight bulb burns out, replace the bulb as follows:

1. Remove the headlight unit screws.



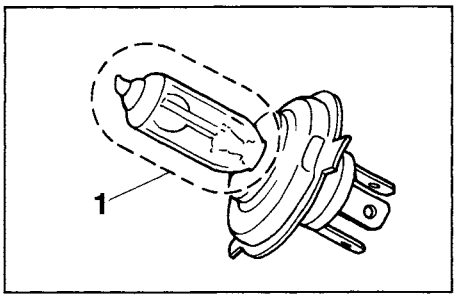
1. Connector
2. Bulb cover

2. Remove the connector, the headlight unit and then the bulb cover.



1. Bulb holder

3. Turn the bulb holder counterclockwise to remove it and remove the defective bulb.



1. Don't touch

EW000119

⚠ WARNING

Keep flammable products and your hands away from a bulb while it is on, as it is hot. Do not touch a bulb until it cools down.

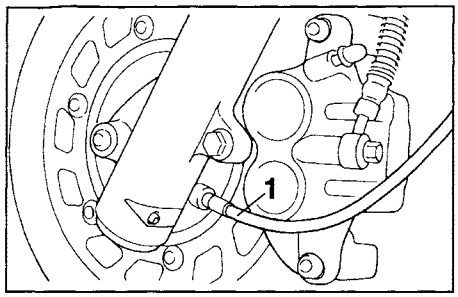
4. Put a new bulb into position and secure it in place with the bulb holder.

EC000105

CAUTION:

Avoid touching the glass part of a bulb. Keep it free from oil; otherwise, the transparency of the glass, life of the bulb, and luminous flux will be adversely affected. If oil gets on a bulb, thoroughly clean it with a cloth moistened with alcohol or lacquer thinner.

5. Install the bulb cover, connector and headlight unit. Ask a Yamaha dealer to adjust the headlight beam if necessary.



1. Speedometer cable

EAU00871

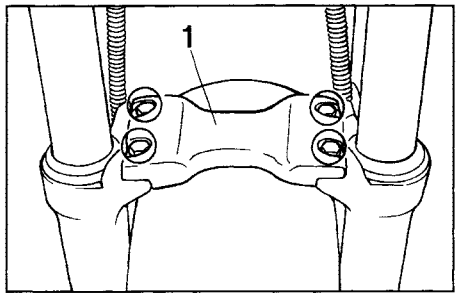
Front wheel removal

EW000122

⚠ WARNING

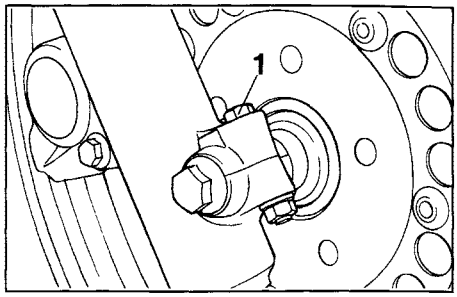
- **It is advisable to have a Yamaha dealer service the wheel.**
- **Securely support the motorcycle so there is no danger of it falling over.**

1. Place the motorcycle on the centerstand.
2. Remove the speedometer cable from the front wheel side.



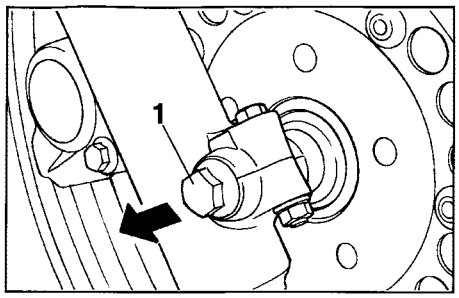
1. Front fork brace

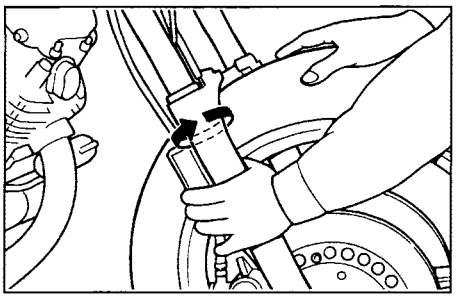
3. Remove the front fork brace together with the fender.



1. Pinch bolt

4. Loosen the pinch bolt.



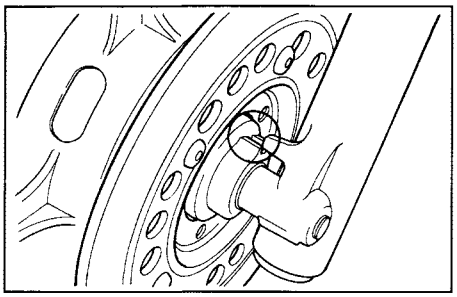


1. Front wheel axle

5. Remove the wheel axle. Make sure the motorcycle is properly supported.

NOTE:
Do not depress the brake lever when the disc and caliper are separated.

6. Lower the wheel until the discs come off the calipers. Turn the calipers outward so they do not obstruct the wheel, then remove the wheel.

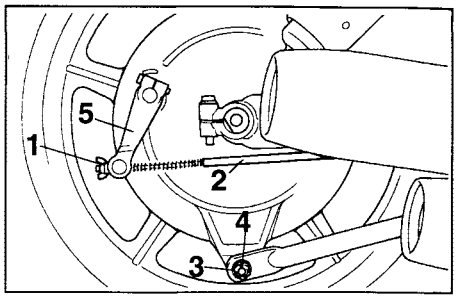


EAU01407

Front wheel installation

1. Lift up the wheel between the front fork legs.
2. Install the speedometer gear unit and the wheel hub with the projections meshed into the slots.
3. Install the wheel axle (make sure the slot in the speedometer gear unit housing fits over the stopper on the front fork outer tube) and let the motorcycle down.
4. Push down hard on the handlebars several times to check for proper fork operation.
5. Install the front fork brace and fender.
6. Install the speedometer cable.
7. Tighten the wheel axle and then the pinch bolt and front fork brace bolts to the specified torque.

Tightening torque:
Wheel axle:
110 Nm (11 m·kg, 80 ft·lb)
Pinch bolt:
20 Nm (2.0 m·kg, 14 ft·lb)
Front fork brace bolt:
9 Nm (0.9 m·kg, 6.5 ft·lb)



1. Adjusting nut
2. Brake rod
3. Brake torque rod nut (brake pedal free play)
4. Cotter pin
5. Brake cam lever

EAU01403

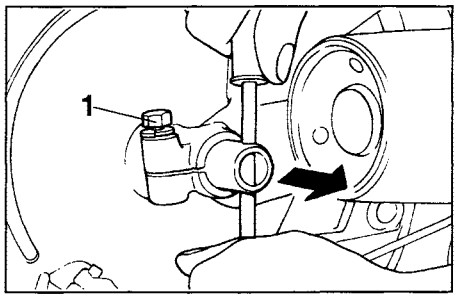
Rear wheel removal

EW000122

⚠ WARNING

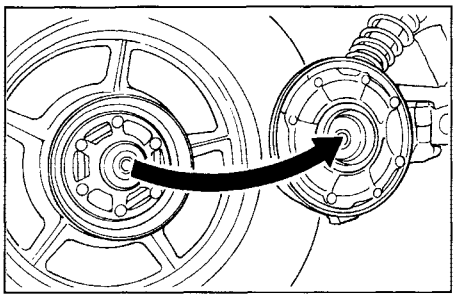
- **It is advisable to have a Yamaha dealer service the wheel.**
- **Securely support the motorcycle so there is no danger of it falling over.**

1. Place the motorcycle on the centerstand.
2. Remove the cotter pin, brake torque rod nut and bolt from the brake shoe plate.
3. Remove the brake adjusting nut and brake rod from the brake cam lever.
4. Remove the axle nut cotter pin and the axle nut.



1. Pinch bolt

5. Loosen the wheel axle pinch bolt and pull out the wheel axle.
6. Move the wheel to the right to separate it from the final gear case and remove the rear wheel.



EAU01406

Rear wheel installation

1. Apply a light coating of lithium base grease to final gear case splines and rear wheel hub splines.
2. Install the rear wheel and axle.
3. Insert the brake rod into the brake cam lever and install the brake pedal free play adjusting nut.
4. Install the brake torque rod bolt and nut.
5. Install the pinch bolt.
6. Let the motorcycle down.
7. Tighten the axle nut, pinch bolt and the brake torque rod nut to the specified torques.

Specified torques:
Axle nut:
110 Nm (11 m·kg, 80 ft·lb)
Pinch bolt:
20 Nm (0.6 m·kg, 4.3 ft·lb)
Brake torque rod nut:
6 Nm (0.6 m·kg, 4.3 ft·lb)

8. Install the brake torque rod cotter pin.

EW000124

⚠ WARNING

Always use a new cotter pin.

9. Adjust the rear brake pedal free play. (See page 6-19.)

EW000103

⚠ WARNING

Check the operation of the brake light after adjusting the rear brake.

EAU01008

Troubleshooting

Although Yamaha motorcycles receive a rigid inspection before shipment from the factory, trouble may occur during operation.

Any problem in the fuel, compression, or ignition systems can cause poor starting and loss of power. The troubleshooting chart describes a quick, easy procedure for making checks.

If your motorcycle requires any repair, bring it to a Yamaha dealer. The skilled technicians at a Yamaha dealership have the tools, experience, and know-how to properly service your motorcycle. Use only genuine Yamaha parts on your motorcycle. Imitation parts may look like Yamaha parts, but they are often inferior. Consequently, they have a shorter service life and can lead to expensive repair bills.

EAU01260

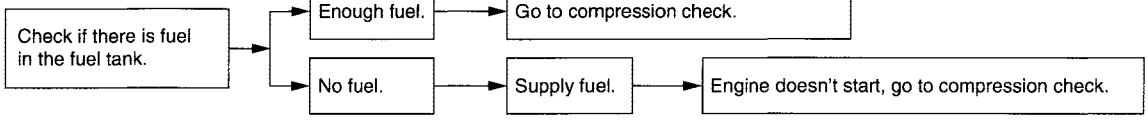
Troubleshooting chart

EW000125

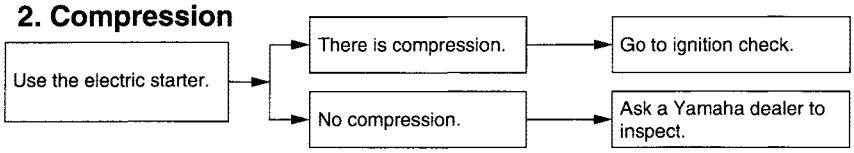
⚠ WARNING

Never check the fuel system while smoking or in the vicinity of an open flame.

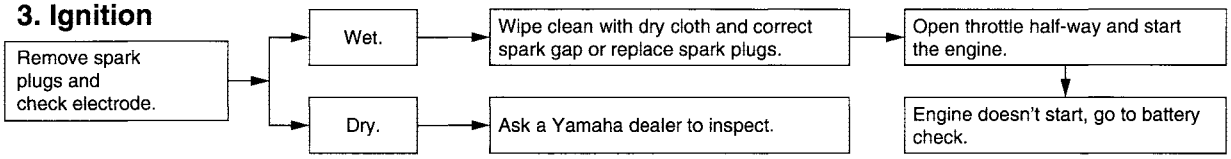
1. Fuel


Check if there is fuel in the fuel tank.
Enough fuel.
Go to compression check.
No fuel.
Supply fuel.
Engine doesn't start, go to compression check.

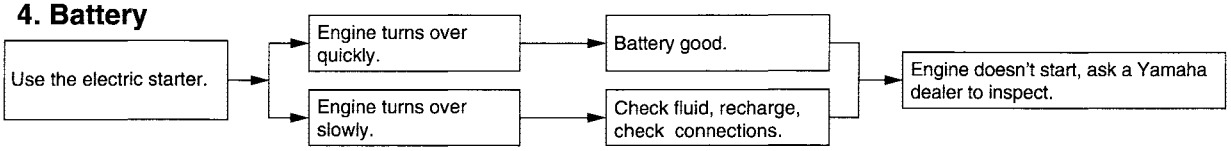
2. Compression



3. Ignition


Remove spark plugs and check electrode.
Wet.
Wipe clean with dry cloth and correct spark gap or replace spark plugs.
Open throttle half-way and start the engine.
Dry.
Ask a Yamaha dealer to inspect.
Engine doesn't start, go to battery check.

4. Battery


Use the electric starter.
Engine turns over quickly.
Battery good.
Engine turns over slowly.
Check fluid, recharge, check connections.
Engine doesn't start, ask a Yamaha dealer to inspect.

CLEANING AND STORAGE

Cleaning 7-1
Storage 7-2

CLEANING AND STORAGE

EAU01010

EAU01330

A. CLEANING

Frequent, thorough cleaning of your motorcycle will not only enhance its appearance but will improve its general performance and extend the useful life of many components.

ECA00002

CAUTION:

- **Improper cleaning can damage the cowlings, panels and other plastic parts. Use only a soft, clean cloth or sponge with mild detergent and water to clean plastic.**
- **Do not use any harsh chemical products on plastic parts. Be sure to avoid using cloths or sponges which have been in contact with strong or abrasive cleaning products, solvent or thinner, fuel (gasoline), rust removers or inhibitors, brake fluid, antifreeze or electrolyte.**

1. Before cleaning the motorcycle:
   a. Block off the end of the exhaust pipes to prevent water entry; a plastic bag and strong rubber band may be used.
   b. Make sure the spark plugs and all filler caps are properly installed.
2. If the engine case is excessively greasy, apply degreaser with a paint brush. Do not apply degreaser to wheel axles.
3. Rinse the dirt and degreaser off with a garden hose. Use only enough pressure to do the job.

EC000111

CAUTION:

Excessive hose pressure may cause water seepage and deterioration of wheel bearings, front fork, brakes, transmission seals and electrical parts.
Many expensive repair bills have resulted from improper high pressure detergent applications such as those available in coin-operated car washers.

4. After riding on salted roads, wash the motorcycle with cold water immediately. Do not use warm water as it increases the chemical reaction of the salt.
5. Once the majority of the dirt has been hosed off, wash all surfaces with warm water and mild, detergent-type soap. An old toothbrush or bottle brush is handy for hard-to-get-at places.

6. Rinse the motorcycle off immediately with clean water and dry all surfaces with a chamois, clean towel or soft absorbent cloth.
7. Clean the seat with a vinyl upholstery cleaner to keep the cover pliable and glossy.
8. Automotive-type wax may be applied to all painted and chrome-plated surfaces. Avoid combination cleaner-waxes. Many contain abrasives which may mar the paint or protective finish. When finished, start the engine and let it idle for several minutes.

EAU01026

B. STORAGE

Long term storage (60 days or more) of your motorcycle will require some preventive procedures to guard against deterioration. After thoroughly cleaning the motorcycle, prepare for storage as follows:

1. Fill the fuel tank with fuel and add fuel stabilizer (if available).
2. Remove the spark plugs, pour about one tablespoon of engine oil in each spark plug hole and reinstall the spark plugs. Turn the engine over several times (ground spark plug leads) to coat the cylinder walls with oil.

EW000127

⚠ WARNING

When using the starter motor to crank the engine, remove the spark plug wires, and ground them to prevent sparking.

3. Lubricate all control cables.
4. Block up the frame to raise both wheels off the ground.
5. Tie a plastic bag over the exhaust pipe outlets to prevent moisture from entering.
6. If storing in a humid or salt-air atmosphere, coat all exposed metal surfaces with a light film of oil. Do not apply oil to any rubber parts or the seat cover.
7. Remove the battery and fully charge it. Store it in a cool, dry place and completely recharge it once a month. Do not store the battery in an excessively warm or cold place (less than 0°C (30°F) or more than 30°C (90°F)). See page 6-27 for battery storage precautions.

NOTE:

Make any necessary repairs before storing the motorcycle.

SPECIFICATIONS

Specifications 8-1

SPECIFICATIONS

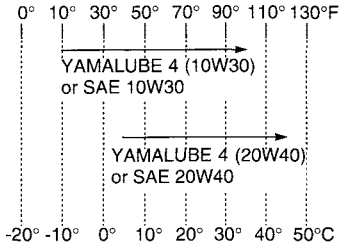
EAU01038

Specifications

Model	**XV1100(C)/XV1100S(C)**
Dimensions:	
Overall length	2,285 mm (90.0 in)
Overall width	840 mm (33.1 in)
Overall height	1,190 mm (46.9 in)
Seat height	715 mm (28.1 in)
Wheelbase	1,525 mm (60.0 in)
Ground clearance	145 mm (5.71 in)
Minimum turning radius	2,800 mm (110.2 in)
Basic weight (with oil and full fuel tank):	239 kg (527 lb)
Engine:	
Engine type	Air-cooled 4-stroke, SOHC
Cylinder arrangement	V type 2-cylinder
Displacement	1,063 cm^3
Bore × Stroke	95 × 75 mm (3.74 × 2.95 in)
Compression ratio	8.3:1
Starting system	Electric starter
Lubrication system	Wet sump

Engine oil:

Type



Recommended engine oil classification:	API Service SE, SF, SG type or higher

CAUTION:

Be sure to use motor oils that do not contain anti-friction modifiers. Passenger car motor oils (often labeled "Energy Conserving") contain anti-friction additives which will cause clutch and/or starter clutch slippage, resulting in reduced component life and poor engine performance.

Quantity:

Periodic oil change	3.0 L (2.6 Imp qt, 3.2 US qt)
With oil filter replacement	3.1 L (2.7 Imp qt, 3.3 US qt)
Total amount	3.6 L (3.2 Imp qt, 3.8 US qt)

Final gear oil:		
Type		SAE 80 API GL-4 Hypoid gear oil If desired, an SAE 80W90 hypoid gear oil may be used for all conditions.
Final gear case capacity		0.2 L (0.18 Imp qt, 0.21 US qt)
Air filter		Dry type element
Fuel:		
Type:		Unleaded fuel
Fuel tank capacity		16.8 L (3.7 Imp gal, 4.4 US gal)
Fuel reserve amount		3 L (0.7 Imp gal, 0.8 US gal)
Carburetor:		
Type × quantity		BST 40 × 2
Manufacturer		MIKUNI
Spark plug:		
Type/Manufacturer		BPR7ES / NGK or W22EPR-U / DENSO
Gap		0.7 ~ 0.8 mm (0.028 ~ 0.031 in)
Clutch type		Wet, multiple-disc
Transmission:		
Primary reduction system		Spur gear
Primary reduction ratio		1.659
Secondary reduction system		Shaft drive
Secondary reduction ratio		3.003
Transmission type		Constant mesh 5-speed
Operation		Left foot operation
Gear ratio:	1st	2.294
	2nd	1.666
	3rd	1.285
	4th	1.032
	5th	0.852
Chassis:		
Frame type		Pressed backbone
Caster angle		32°
Trail		129 mm (5.08 in)
Tire:		
Type		Tubeless
Size:		
Front		100/90-19 57H
Rear		140/90-15M/C 70H
Manufacturer/model:		
Front		Bridgestone/G535 Dunlop/F17
Rear		Bridgestone/G536 Dunlop/K425
Maximum load*		231 kg (509 lb)
Air pressure (cold tire):		

SPECIFICATIONS

Up to 90 kg (198 lb) load*:	
Front	200 kPa; 2.00 kgf/cm^2; 29 psi
Rear	225 kPa; 2.25 kgf/cm^2; 33 psi
90 kg (198 lb) load ~ maximum load*:	
Front	200 kPa; 2.00 kgf/cm^2; 29 psi
Rear	250 kPa; 2.50 kg/cm^2; 36 psi

* Load is total weight of cargo, rider, passenger and accessories.

Wheels:

Type:	
Front	Cast
Rear	Cast
Size:	
Front	19 × MT 2.15
Rear	15M/C × MT 3.00

Brakes:

Front:	
Type	Dual disc brake
Operation	Right hand operation
Fluid	DOT 4 or DOT 3
Rear:	
Type	Drum brake
Operation	Right foot operation

Suspension:

Front:	
Type	Telescopic fork
Rear:	
Type	Swingarm

Shock absorbers:

Front	Coil spring / oil damper
Rear	Coil spring / oil damper

Wheel travel:

Front	150 mm (5.9 in)
Rear	97 mm (3.8 in)

Electrical system:

Ignition system	T.C.I. (digital)
Charging system:	
Type	A.C. magneto
Standard output	14 V, 20 A @ 5,000 rpm
Battery:	
Type	GM18Z-3A
Voltage, capacity	12 V, 20 AH

Headlight type Quartz bulb (halogen)

Bulb voltage, wattage × quantity:	
Headlight	12 V, 60 W / 55 W × 1
Tail/brake light	12 V, 8 W / 27 W × 2
Front flasher/position light	12 V, 27 W / 8 W × 2
Rear flasher light	12 V, 27 W × 2
Meter light	12 V, 3 W × 4
Neutral indicator light	12 V, 3 W × 1
High beam indicator light	12 V, 3 W × 1
Oil level indicator light	12 V, 3 W × 1
Turn indicator light	12 V, 3 W × 2
Fuel indicator light	12 V, 3 W × 1
Fuses:	
Main fuse	30 A
Headlight fuse	15 A
Taillight fuse	10 A
Signaling system fuse	15 A
Ignition fuse	10 A

CONSUMER INFORMATION

Identification numbers record 9-1
Key identification number 9-1
Vehicle identification number 9-1
Model label 9-2
Reporting safety defects 9-3
Motorcycle noise regulation 9-4
Maintenance record 9-5
Street end enduro motorcycle limited warranty 9-7
Yamaha extended service 9-9

CONSUMER INFORMATION

EAU01039

EAU01040

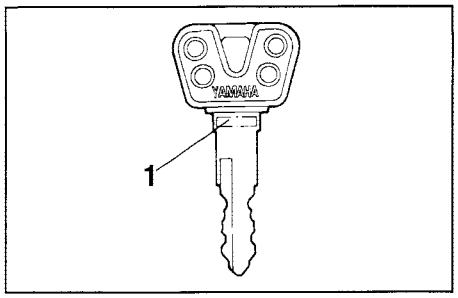
Identification numbers record

Record the key identification number, vehicle identification number and model label information in the spaces provided for assistance when ordering spare parts from a Yamaha dealer or for reference in case the vehicle is stolen.

1. KEY IDENTIFICATION NUMBER:

2. VEHICLE IDENTIFICATION NUMBER:

3. MODEL LABEL INFORMATION:

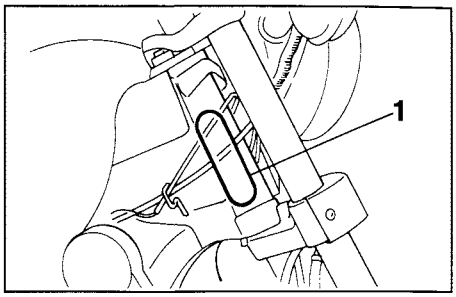


1. Key identification number

EAU01042

Key identification number

The key identification number is stamped on the key. Record this number in the space provided and use it for reference when obtaining a new key.



1. Vehicle identification number

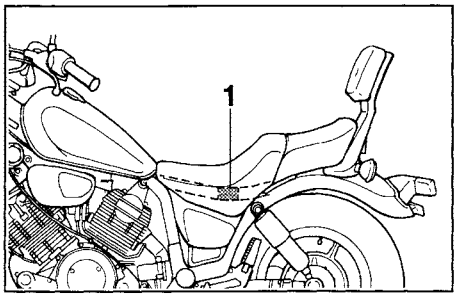
EAU01043

Vehicle identification number

The vehicle identification number is stamped into the steering head pipe. Record this number in the space provided.

NOTE:

The vehicle identification number is used to identify your motorcycle and may be used to register your motorcycle with the licensing authority in your state.



1. Model label

EAU01050

Model label

The model label is affixed to the frame under the seat. (See page 3-12 for seat removal procedures.) Record the information on this label in the space provided. This information will be needed to order spare parts from your Yamaha dealer.

CONSUMER INFORMATION

EAU01051

REPORTING SAFETY DEFECTS

If you believe that your vehicle has a defect which could cause a crash or could cause injury or death, you should immediately inform the National Highway Traffic Safety Administration (NHTSA) in addition to notifying YAMAHA MOTOR CORP. U.S.A.. If NHTSA receives similar complaints, it may open an investigation, and if it finds that a safety defect exists in group of vehicles, it may order a recall and remedy campaign. However, NHTSA cannot become involved in individual problems between you, your dealer, or YAMAHA MOTOR CORP. U.S.A..

To contact NHTSA, you may either call the Auto Safety Hotline toll-free at 1-800-424-9393 (or 366-0123 in Washington, D.C. area) or write to: NHTSA, U.S. Department of Transportation, Washington, D.C. 20590. You can also obtain other information about motor vehicle safety from the Hotline.

EAU01053

MOTORCYCLE NOISE REGULATION

TAMPERING WITH NOISE CONTROL SYSTEM PROHIBITED:
Federal law prohibits the following acts or the causing thereof: (1) The removal or rendering inoperative by any person other than for purposes of maintenance, repair, or replacement of any device or element of design incorporated into any new vehicle for the purpose of noise control prior to its sale or delivery to the ultimate purchaser or while it is in use or (2) the use of the vehicle after such device or element of design has been removed or rendered inoperative by any person.

"AMONG THOSE ACTS PRESUMED TO CONSTITUTE TAMPERING ARE THE ACTS LISTED BELOW".

These acts include tampering with the following systems; i.e., modification, removal, etc.

Exhaust system	Muffler Exhaust pipe Silencer
Intake system	Air cleaner case Air cleaner element Intake duct

EAU01059

MAINTENANCE RECORD

Copies of work orders and/or receipts for parts you purchase and install will be required to document that maintenance has been completed in accordance with the emission warranty. The chart below is printed only as a reminder to you that the maintenance work is required. It is not acceptable proof of maintenance work.

MAINTENANCE INTERVAL	DATE OF SERVICE	MILEAGE	SERVICING DEALER NAME AND ADDRESS	REMARKS
1,000km (600mi) or 1 mo.				
7,000km (4,400mi) or 7 mos.				
13,000km (8,200mi) or 13 mos.				
19,000km (12,000mi) or 19 mos.				
25,000km (15,800mi) or 25 mos.				
31,000km (19,600mi) or 31 mos.				
37,000km (23,400mi) or 37 mos.				

MAINTENANCE INTERVAL	DATE OF SERVICE	MILEAGE	SERVICING DEALER NAME AND ADDRESS	REMARKS
43,000km (27,200mi) or 43 mos.				
49,000km (31,000mi) or 49 mos.				
55,000km (34,800mi) or 55 mos.				
61,000km (38,600mi) or 61 mos.				

CONSUMER INFORMATION

EAU01061

YAMAHA MOTOR CORPORATION, U.S.A.
STREET AND ENDURO MOTORCYCLE LIMITED WARRANTY

Yamaha Motor Corporation, U.S.A. hereby warrants each new model Yamaha motorcycle will be free from defects in material and workmanship for the period of time stated herein, subject to certain stated limitations.

THE PERIOD OF WARRANTY for Yamaha motorcycles originally equipped with headlight, stoplight, and turn signals shall be one (1) year from the date of purchase, with no mileage limitation.

MODELS EXCLUDED FROM WARRANTY include those used for non-Yamaha-authorized renting, leasing, or other commercial purposes, and TZ models.

DURING THE PERIOD OF WARRANTY any authorized Yamaha motorcycle dealer will, free of charge, repair or replace any part adjudged defective by Yamaha due to faulty workmanship or material from the factory. Parts used in warranty repairs will be warranted for the balance of the product's warranty period. All parts replaced under warranty become property of Yamaha Motor Corp. U.S.A.

GENERAL EXCLUSIONS from this warranty shall include any failures caused by:

a. Competition or racing use.
b. Installation of parts or accessories that are not qualitatively equivalent to genuine Yamaha parts.
c. Abnormal strain, neglect, or abuse.
d. Lack of proper maintenance.
e. Accident or collision damage.
f. Modification to original parts.

SPECIFIC EXCLUSIONS from this warranty shall include parts replaced due to normal wear or routine maintenance.

THE CUSTOMER'S RESPONSIBILITY under this warranty shall be to:

1. Operate and maintain the motorcycle as specified in the appropriate Owner's Manual, and
2. Give notice to an authorized Yamaha motorcycle dealer of any and all apparent defects within ten (10) days after discovery, and make the machine available at that time for inspection and repairs at such dealer's place of business.

WARRANTY TRANSFER: To transfer the warranty from the original purchaser to any subsequent purchaser, it is imperative that the machine be inspected and registered for warranty by an authorized Yamaha motorcycle dealer. In order for this warranty to remain in effect, this inspection and registration must take place within ten (10) days after transfer. An inspection and registration fee will be charged for this service.

EMISSIONS CONTROL SYSTEM WARRANTY
Yamaha Motor Corporation, U.S.A. also warrants to the ultimate purchaser and each subsequent purchaser of each Yamaha motorcycle covered by this warranty with a displacement of 50cc or greater, that the vehicle is designed, built, and equipped so as to conform at the time of sale with all U.S. emissions standards applicable at the time of manufacture and that it is free from defects in materials and workmanship which would cause it not to meet these standards within the periods listed immediately below. Failure other than those resulting from defects in material or workmanship which arise solely as a result of owner abuse and / or lack of proper maintenance are not covered by this warranty.

ENGINE DISPLACEMENT	PERIOD
50cc to 169cc	12,000 km (7,465 miles) or five years, whichever occurs first
170cc to 279cc	18,000 km (11,185 miles) or five years, whichever occurs first
280cc or over	30,000 km (18,641 miles) or five years, whichever occurs first

YAMAHA MOTOR CORPORATION, U.S.A. MAKES NO OTHER WARRANTY OF ANY KIND, EXPRESSED OR IMPLIED. ALL IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE WHICH EXCEED THE OBLIGATIONS AND TIME LIMITS STATED IN THIS WARRANTY ARE HEREBY DISCLAIMED BY YAMAHA MOTOR CORPORATION, U.S.A. AND EXCLUDED FROM THIS WARRANTY.

SOME STATES DO NOT ALLOW LIMITATIONS ON HOW LONG AN IMPLIED WARRANTY LASTS, SO THE ABOVE LIMITATION MAY NOT APPLY TO YOU. ALSO EXCLUDED FROM THIS WARRANTY ARE ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES INCLUDING LOSS OF USE. SOME STATES DO NOT ALLOW THE EXCLUSION OR LIMITATION OF INCIDENTAL OR CONSEQUENTIAL DAMAGES, SO THE ABOVE EXCLUSION MAY NOT APPLY TO YOU.

THIS WARRANTY GIVES YOU SPECIFIC LEGAL RIGHTS, AND YOU MAY ALSO HAVE OTHER RIGHTS WHICH VARY FROM STATE TO STATE.

YAMAHA MOTOR CORPORATION, U.S.A.
P.O. Box 6555
Cypress, California 90630

WARRANTY QUESTIONS AND ANSWERS

Q. What costs are my responsibility during the warranty period?
A. The customer's responsibility includes all costs of normal maintenance services, non-warranty repairs, accident and collision damages, and oil, oil filters, air filters, spark plugs, and brake shoes.

Q. What are some examples of "abnormal" strain, neglect, or abuse?
A. These terms are general and overlap each other in areas. Specific examples include: Running the machine out of oil, sustained high-rpm, full-throttle, operating the machine with a broken or damaged part which causes another part to fail, damage or failure due to improper or careless transportation and or tie down. If you have any specific questions on operation or maintenance, please contact your dealer for advice.

Q. Does the warranty cover incidental costs such as towing or transportation due to a failure?
A. No. The warranty is limited to repair of the machine itself.

Q. May I perform any or all of the recommended maintenance shown in the Owner's Manual instead of having the dealer do them?
A. Yes, if you are a qualified mechanic and follow the procedures specified in the Owner's and Service Manual. We do recommend, however, that items requiring special tools or equipment be done by Yamaha Motorcycle dealer.

Q. Will the warranty be void or cancelled if I do not operate or maintain my new motorcycle exactly as specified in the Owner's Manual?
A. No. The warranty on a new motorcycle cannot be "voided" or "cancelled." **However, if a particular failure is caused by operation or maintenance other than as shown in the Owner's Manual, that failure may not be covered under warranty.**

Q. What responsibility does my dealer have under this warranty?
A. Each Yamaha Motorcycle dealer is expected to:
1. Completely set up every new machine before sale.
2. Explain the operation, maintenance, and warranty requirements to your satisfaction at the time of sale, and upon your request at any later date.
3. Each Yamaha Motorcycle dealer is held responsible for his setup, service and warranty repair work.

Q. Is the warranty transferable to second owners?
A. Yes. The remainder of the existing warranty can be transferred upon request. The unit has to be inspected and re-registered by an authorized Yamaha Motorcycle dealer for the policy to remain effective.

CUSTOMER SERVICE

If your machine requires warranty service, you must take it to any authorized Yamaha Motorcycle dealer within the continental United States. Be sure to bring your warranty registration card or other valid proof of the original date of purchase. If a question or problem arises regarding warranty, first contact the owner of the dealership. Since all warranty matters are handled at the dealer level, this person is in the best position to help you. If you are still not satisfied and require additional assistance, please write:

YAMAHA MOTOR CORPORATION U.S.A.
CUSTOMER RELATIONS DEPARTMENT
P.O. Box 6555
Cypress, California 90630

When contacting Yamaha Motor Corporation, U.S.A. don't forget to include any important information such as names, addresses, model, V.I.N. (frame number), dates, and receipts.

CHANGE OF ADDRESS

The federal government requires each manufacturer of a motor vehicle to maintain a complete, up-to-date list of all first purchasers against the possibility of a safety-related defect and recall. This list is compiled from the purchase registrations sent to Yamaha Motor Corporation, U.S.A. by the selling dealer at the time of your purchase.

If you should move after you have purchased your new motorcycle, please advise us of your new address by sending a postcard listing your motorcycle model name, V.I.N. (frame number), dealer number (or dealer's name) as it is shown on your warranty card, your name and new mailing address. Mail to:

YAMAHA MOTOR CORPORATION, U.S.A.
P.O. Box 6555
Cypress, California 90630
Attention: Warranty Department

This will ensure that Yamaha Motor Corporation, U.S.A. has an up-to-date registration record in accordance with federal law.

EAU01063

YAMAHA EXTENDED SERVICE (Y.E.S.)

Keep your Yamaha protected even after your warranty expires with genuine Yamaha Extended Service (Y.E.S.).

- Y.E.S. is designed and administered by Yamaha Motor Corporation to provide maximum owner satisfaction. You get uninterrupted factory-backed coverage for extra peace of mind.
- Y.E.S. is flexible. You choose the plan that's right for you: 12 months, 24 months, or 36 months beyond your warranty period.
- Y.E.S. is designed and administered by the same Yamaha people who handle your warranty – and it shows in the comprehensive coverage benefits. There are no mileage limitations. Coverage isn't limited to "moving parts" or the "drive train" like many other plans. And Y.E.S. covers manufacturing defects just like the warranty. See the sample contract at your Yamaha dealer to see how comforting uninterrupted factory-backed protection can be.
- You don't have to pay anything for covered repairs. There's no deductible to pay, and repairs aren't "pro-rated." You don't have any "out-of-pocket" expenses for covered repairs.
- In addition, Travel and Recreation Interruption Protection (TRIP) is included at no extra cost. TRIP gives you up to $150 reimbursement per occurrence for any reasonable expenses you incur because your Yamaha needs covered service: replacement vehicle rental, emergency towing, phone calls, even food and lodging when you are away from home. This superb coverage goes into effect when you purchase Y.E.S., so it applies to any warranty repairs as well as covered repairs during your entire Y.E.S. plan period.
- Y.E.S. coverage is honored at any authorized Yamaha dealer nationwide.
- Y.E.S. coverage is transferable to a new owner if you sell or trade-in. That can make your Yamaha much more valuable!

This excellent Y.E.S. plan coverage is only available to Yamaha owners like you, and only while your Yamaha is still within the Yamaha Limited Warranty period. So visit your authorized Yamaha dealer to get all the facts. He can show you how easy it is to protect your investment with Yamaha Extended Service.

We urge you to act now. You'll get the excellent benefits of TRIP coverage right away, and you'll rest easy knowing you'll have strong factory-backed protection even after your Yamaha Limited Warranty expires. You can also save money: Y.E.S. costs less within the first 90 days after you buy your Yamaha. See your dealer today!

A special note:
If visiting your dealer isn't convenient, contact Yamaha with your Primary ID number (your frame number). We'll be happy to help you get the Y.E.S. coverage you need.

Yamaha Service Marketing
P.O. Box 6555
Cypress, CA 90630

YAMAHA EXTENDED SERVICE

INDEX

A

Accessories or replacement parts 6-17
Air filter 6-12

B

Battery 6-26
Brake and clutch lever lubrication 6-24
Brake and shift pedal lubrication 6-23
Brake fluid replacement 6-22
Brake light switch adjustment 6-20

C

Cable inspection and lubrication 6-23
Canister (for California only) 6-8
Carburetor adjustment 6-14
Cast wheels 6-17
Center and sidestand lubrication 6-24
Checking the front brake pads and rear brake shoes 6-21
Cleaning 7-1
Clutch lever 3-9
Clutch lever free play adjustment 6-18
Controls/Instruments 2-3

D

Dimmer switch 3-7

E

Engine break-in 5-6
Engine oil 6-8
Engine stop switch 3-7

F

Final gear oil 6-11
Front brake lever 3-9
Front brake lever free play adjustment 6-19
Front fork inspection 6-25
Front wheel installation 6-33
Front wheel removal 6-31
Fuel 3-11
Fuel indicator circuit check 3-5
Fuel indicator light 3-3
Fuel reserve switch 3-8
Fuel tank cap 3-10
Fuse replacement 6-28

G

Gasoline and exhaust gas 1-5
General maintenance and lubrication chart 6-4

H

Handlebar switches 3-7
- Dimmer switch 3-7
- Engine stop switch 3-7
- Fuel reserve switch 3-8
- Hazard switch 3-8
- Horn switch 3-7
- Start switch 3-8
- Turn signal switch 3-7

Hazard switch 3-8
Headlight bulb replacement 6-29
Helmet holder 3-12
High beam indicator light 3-2
Horn switch 3-7

I

Identification numbers record 9-1
Indicator lights 3-2
- Fuel indicator light 3-3
- High beam indicator light 3-2
- Neutral indicator light 3-2
- Oil level indicator light 3-2
- Turn indicator lights 3-2

Inspecting the brake fluid level 6-21

K

Key identification number 9-1

L

Left view 2-1
Loading and accessories 1-3
Location of the important labels 1-7

M

Main switch/Steering lock 3-1
Maintenance record 9-5
Model label 9-2
Modification 1-3
Motorcycle noise regulation 9-4

N

Neutral indicator light 3-2

O

Oil level indicator circuit check 3-4
Oil level indicator light 3-2

P

Parking 5-7
Periodic maintenance 6-1
Periodic maintenance chart for emission control system 6-3
Pre-operation check list 4-1
Protective apparel 1-3

R

Rear brake pedal 3-10
Rear brake pedal height and free play adjustment 6-19
Rear shock absorber adjustment 3-13
Rear suspension lubrication 6-24
Rear wheel installation 6-35
Rear wheel removal 6-33
Recommended shift point 5-6
Reporting safety defects 9-3
Right view 2-2

S

Safe riding 1-1
Seat removal 3-12
Shift pedal 3-9
Shifting 5-5
Sidestand 3-14
Sidestand/clutch switch operation check 3-15
Spark plug inspection 6-7
Specifications 8-1
Speedometer 3-6
Start switch 3-8
Starter (choke) 3-8
Starting a warm engine 5-4
Starting and warming up a cold engine 5-1
Steering inspection 6-25
Storage 7-2
Street and enduro motorcycle limited warranty 9-7

T

Tachometer 3-6
Throttle cable and grip lubrication 6-23
Throttle cable free play inspection 6-14
Tires 6-15
To decelerate 5-6
To start out and accelerate 5-5
Tool kit 6-1
Troubleshooting 6-35
Troubleshooting chart 6-36
Turn indicator lights 3-2
Turn signal switch 3-7

V

Valve clearance adjustment 6-14
Vehicle identification number 9-1

W

Wheel bearings 6-26

Y

Yamaha extended service 9-9